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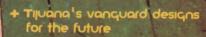
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# **ALCHITECTALE**

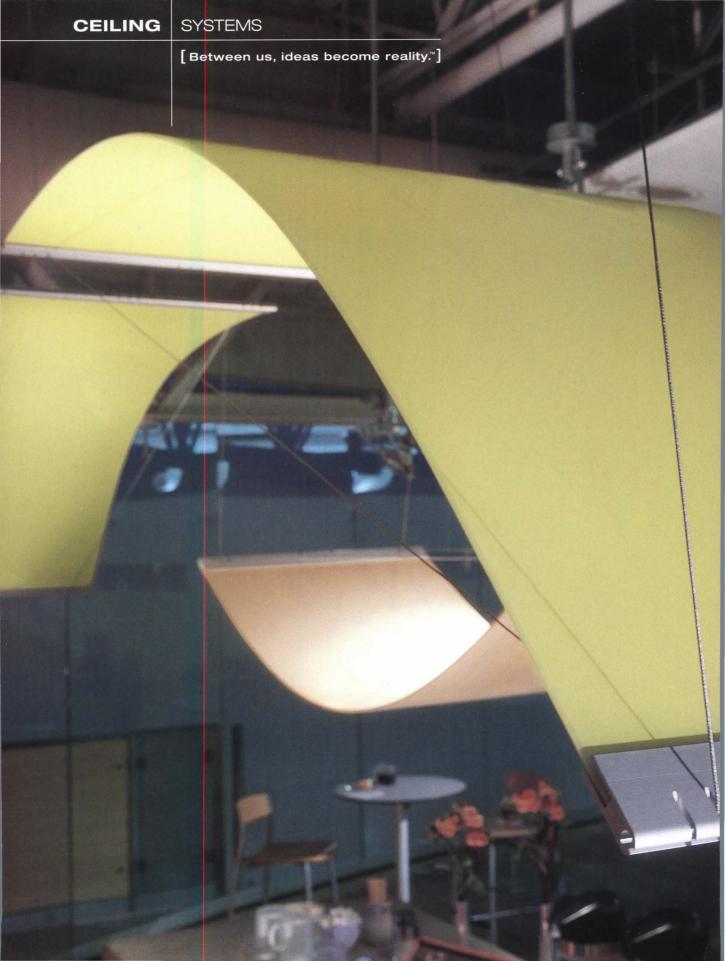
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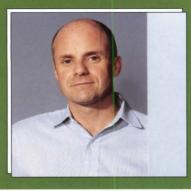




- + Julie Bargmann gets dirty
- + Predock Frane's New Mexican Zen
- + SMBW burrows into the Blue Ridge Mountains
- + A Maya Lin chapel takes root



#### editorial





While the war in Iraq and gay marriage may dominate headlines this campaign season, many architects wonder how our next president will handle the core issues for our society and profession. A big one is shelter. The National Housing Conference says that 14 million American families have "critical housing needs," spending more than half of their household income on rents or mortgages. Yet there's been zero debate on housing policy and only the most paltry analysis of the candidates' records.

As a public service, I offer this condensed history. First, on President Bush: He frequently points out that today's "homeownership rates are at record levels"—in fact, 70 percent of American families own a home. While no one gets credit for a decade of low interest rates, the citation sheds light on the Bush administration's approach to housing: spurring private-sector development and purchasing. In the first year of his term (by far his busiest in terms of housing policy), Bush proposed the "American Dream Downpayment Fund," which applies HUD Section 8 rental vouchers toward a first home purchase and turns low-income rentals into owner-occupied units. Later in 2000, Bush unveiled rent vouchers and homeowner credits in his "New Prosperity Initiative," which also offered real estate investors 50-percent tax credits totaling \$1.7 billion for home rehabs in poor neighborhoods.

Four years later, Bush is subtracting about the same amount, \$1.6 billion, from the Section 8 program—a move that affects at least 250,000 low-income families. The 2005 budget also deeply cuts funding for HOPE VI, a program that helps Americans purchase affordable homes or move into improved units. (And funding for American Dream, passed in 2003, will reach only about 600 families per year.) Like his father, Bush has aimed to serve the nation's neediest by creating taxpayer "incentives to donate to charity" and by boosting "the heroic work of homeless shelters" and aid groups. He never set out "to solve the nation's housing problems," Bush often reminds us, but rather to deliver "a bucket of new tools"—mainly tax credits—to encourage home ownership, which he feels helps reduce crime and improve schools.

The record of challenger John Kerry suggests a different approach, matching private-sector incentives and tax credits with targeted federal investments in affordability and rental assistance. Back in 1991, the Massachusetts senator advocated "YouthBuild," a program that matched at-risk youth with construction training on affordable-housing projects. Later, he helped create the Multifamily Assisted Housing Restructuring and Reform Act of 1997, which preserved and renovated thousands of affordable rental apartments. In 1998, Kerry helped rewrite public housing laws for the first time in more than two decades; the result let housing authorities raise private capital through the bond market and offered portable rental vouchers to the poor, which could also be applied to home purchases. In 2000, he introduced a bill for a "trust fund" for affordable development in areas with shortages, and in 2002 he offered a tax credit for constructing low-income homes.

In sharper contrast from Bush, Kerry has backed legislation that directly addresses the relationships between housing and entrenched social challenges. Kerry offered an amendment in 1999 to increase housing assistance for the disabled and AIDS-afflicted; in 2000, Kerry sponsored the *Affordable Housing for Seniors and Families Act*, which favored mixedincome, mixed-financing developments for the elderly and disabled, as well as grants to convert elderly housing into assisted-living units.

Kerry and Bush overlap a bit, notably on tax credits, which work better for developers than for the average American. But as for supporting decent housing for all, their approaches are worlds apart.

So while boosting national security is of vital concern to today's voter, so too must be the most basic human necessities, the underpinnings of a civil and just society. Homeownership levels are high, yes, but so are rents, homelessness, and poverty levels. Whoever you vote for, make sure they represent your views, both political and personal, on shelter.

Coming in November: ARCHITECTURE's Home of the Year Awards. A world-class jury unveils fresh ideas in housing.

#### Fair deal

Glad to see the World's Fairs Protest page [August 2004, page 96]. Our withdrawal from these events is a pathetic mistake. How many fair pavilions equal one ICBM? At the Seville Fair of 1992, where the U.S. pavilion placed an embargo on all journalists, some of the best exhibits were from the smallest places—Finland, for instance, and a number of the Spanish provinces. One of the great aspects of the U.S. pavilions at Expo '67 in Montreal and Expo '70 in Osaka was the integration of exhibits and architecture. In fact, the exhibition designer Chermayeff & Geismar was commissioned first, and they chose the architects. Since they cared a lot about architecture (as did Jack Macy, the federal official in charge of our pavilions in those days) the result was a fine integration.

John Morris Dixon

Old Greenwich, Connecticut

#### NCARB's reciprocal push

While they can and do sign practice accords, neither AIA nor its counterpart, the Architectural Society of China (ASC), is able to independently negotiate reciprocity agreements [August 2004, page 11]. In our discussions around the globe on reciprocity, we include the AIA as our partner. Currently, there are negotiations underway with the European Union, with 21 Pacific Rim economies under the Asia-Pacific Economic Cooperation, and with Canada and Mexico under NAFTA. We hope to have a signed agreement with the Architects Council of Europe by June 2005.

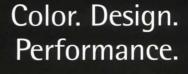
As for the People's Republic of China (PRC), NCARB has had cooperation agreements since 1993 with our licensing counterpart, the National Administration Board of Architectural Registration. In 1999, we signed a



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groundbreaking Practice in a Host Nation agreement including a program to work toward full mutual recognition; we subsequently implemented the agreement. Since then we have agreed that the education and experience (internship) in both countries are equivalent. At this time, China has put steps toward studying the equivalency of examination on hold.

**Lenore M. Lucey,** Executive Vice President NCARB, Washington, D.C.



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#### IN CHICAGO, IT'S <u>BLOCK 37 - AGAIN</u>

A huge mixed-use project was quietly unveiled last month for a choice 2.4-acre parcel in downtown Chicago known as Block 37. Why so little fanfare? It's the fourth scheme in the 15 years since the site was emptied by the city government. Past doomed attempts featured designs by Helmut Jahn, Kohn Pedersen Fox, and Solomon Cordwell Buenz. Is the site cursed?



"It's cursed by greed and manipulation," says Ross Miller, author of *Here's the Deal*, a book that chronicles Block 37's troubled history. It started when an 1960s urban-renewal effort by then-mayor Richard J. Daley extended eminent domain to condemn downtown properties that weren't seen as commercially viable. A parade of grandiose proposals followed, but none of them attracted serious investors.

Many wonder how the city's latest designated developer, Arlington, Virginia-based Mills Corporation—known for its big entertainmentretail venues—can fare better. Mills at least benefits from the skills of Perkins & Will's Ralph Johnson, who emphasizes the public components of the proposed work, such as its fifth-floor green plaza. "The downtown area is more of a neighborhood now, and this would be its center," says Johnson. Rising from the shopping-center podium is an office tower, a hotel, and residences, with a new subway stop below.

Even by Chicago standards, this is big news, but the public has hardly taken notice. "It sounds good, but it's not on people's minds, really," says architect Stanley Tigerman. "And from an urban point of view, the developer's proposal doesn't stir men's blood." **C.C. Sullivan** 

#### "DOME HOME" SURVIVES HURRICANE HIT

A distinctly shaped Pensacola Beach, Florida, residence designed to withstand a direct hit from a tropical storm survived exactly that after finding itself directly in the path of last month's Hurricane Ivan, although many neighboring homes



were completely destroyed. Designed by San Francisco–area architect Jonathan Zimmerman and Brigham Young University engineering professor Arnold Wilson, the "Dome Home," so named for its thin-shell concrete form, was built in 2003 on 16 pilings driven 17 feet into the barrier island on which it sits. The house's shape lets waves wash around it rather than knock it down, and it has breakaway stairs that yield to high water levels. Designed for 300-mile-an-hour winds and equipped with an emergency generator, the home was partly funded by a Federal Emergency Management Agency grant. **Jamie Reynolds** 

#### E. FAY JONES, 1921-2004

Arkansas architect and educator Euine Fay Jones, the 1990 winner of the AIA Gold Medal, died on August 30. He was 83.

Jones's long career combined teaching and practice from the start. He helped teach in design studios before graduating in the first class of the University of Arkansas (UA) architecture school in 1950 and returned as a teacher and the school's first dean three years later. Also in 1953, Jones served as a fellow at Taliesin West, where he was deeply influenced by Frank Lloyd Wright's integration of the built and natural environments. Back in Fayetteville, where the architecture school is located, he pursued relatively small-scale commissions-mostly houses, religious structures, fountains, and gardens. His reputation grew national, as his projects received honor awards and the design press paid increasing attention to his elegant detailing and use of local materials. Most prominent among his award-winning projects is Thorncrown Chapel (1980), a 48-foot-high timber and glass structure that rises from a wooded site outside Eureka Springs, Arkansas (below). Other recognition includes a 1981 Rome Prize Fellowship and the 1985 Distinguished Professor Award presented by the Association of Collegiate Schools of Architecture.

Jones retired from UA in 1988 as a professor emeritus and from professional practice a decade later. **Abby Bussel** 





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#### TIME UP FOR BRITISH BRUTALISM?

George Ferguson, president of the Royal Institute for British Architects (RIBA), is campaigning for a new preservation designation of sorts: Grade X would call for the demolition of "ugly" buildings in the United Kingdom. The designation would come with government grants and tax incentives for the alteration or removal of edifices. "The system must be robust enough to avoid the sort of mistakes inherent in capital punishment; As with capital punishment, there could be no going back," Ferguson editorialized in London's *The Evening Standard* newspaper.

The 57-year-old architect specifically targets late modern structures, such as Baynard House, a brutalist office building near London's Millenium Bridge. Although Ferguson conceded it was designed by a great architect, Lord William Holford, he feels it is "more akin to a car park than an office building" and mars the view of St. Paul's Cathedral. Despite the RIBA president's personal aversions to some styles, his proposal is intended to be for public benefit. As conceived, Grade X would largely be handed out in areas where a building's removal would spur urban renewal that adheres to traditional planning principles as well as high-density and sustainable housing.

The final decision whether to implement Grade X will be up to the government's preservation arm, English Heritage, who would also be repsonsible for determining what buildings would qualify. No deadline has been set for rejection or approval of the proposal. **Bay Brown** 

#### ARCHITECTURE PATRON J. IRWIN MILLER, 1989-2004, TRANSFORMED INDIANA TOWN

J. Irwin Miller, who died August 16 at age 95, was an architectural patron who literally transformed his Indiana hometown into a world renowned hub of modern design. As chief executive of Cummins Engine Company, Miller established a foundation in the 1950s to improve the livability of Columbus, which was suffering from postindustrial malaise. The foundation started with improved public schools, hoping that they would draw educated workers to the city, helping its revival. Cummins paid the design fees for a dozen schools by talented young architects, going on to support other types of public buildings, from a post office to a library. Harry Weese, I.M. Pei, and Robert Venturi are among those who contributed designs.

Miller's influence started in the 1930s, when he persuaded his congregation to commission a new church by Eliel Saarinen; the result became an icon of U.S. modern architecture. In 1957, Miller and his wife, Xenia, commissioned a house by Eero Saarinen with landscaping by Dan Kiley; it was designated a National Historic Landmark in 2001. **Abby Bussel** 

- E New York City's Cooper Union has unveiled plans for a new \$105 million academic building designed by Los Angeles-based Morphosis, to be sited next to the school's 1859 Foundation Building by architect Frederick A. Peterson. The college, the only one in the United States offering free tuition to all its students, is known for its engineering, art, and architecture programs. Gruzen Samton will be associate architect.
- → Howard Decker has resigned as chief curator of the National Building Museum as of the start of last month. The museum is reportedly reshuffling its staff so that all curators will report to director Chase Rynd.
- ⇒ Santiago Calatrava's Travels, a feature-length film about the renowned architect, has been released by First Run/Icarus Films. The movie joins The Next Generation, a chronicle of the work and philosophy of environmentally minded designer William McDonough, among this year's guru documentaries.

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#### MAX ABRAMOVITZ, 1908-2004

Architect Max Abramovitz, who made contributions to the designs of Lincoln Center and the United Nations headquarters, died at age 96 in Pound Ridge, New York, on September 12, only days before a retrospective of his work opened at Columbia University.

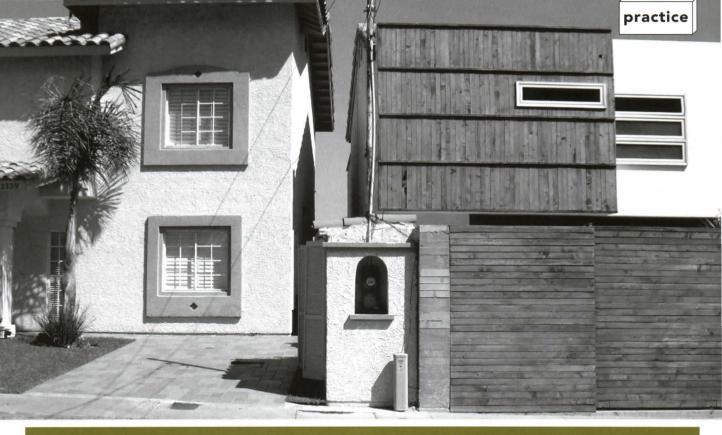
The Chicago-born mod-



ernist spent much of his career working with partner Wallace Harrison in the New York City-based firm Harrison & Abramovitz, but it was Abramovitz who was responsible for Lincoln Center's Avery Fisher Hall (1962). His most high-profile and most controversial design, it was hailed for the way its tapered, unadorned columns frame glass-walled interior spaces and disparaged for its unsatisfactory acoustics. Deputy director of planning for the U.N. complex, Abramovitz was also responsible for more than one hundred other projects, such as the Wachovia Bank Building (1958) in Charleston, North Carolina; the Assembly Hall (1963) at the University of Illinois at Urbana-Champaign (above); and a 1950s master plan for Brandeis University's campus in Waltham, Massachusetts.

The Troubled Search: The Work of Max Abramovitz at Columbia's Wallach Art Gallery runs through December 11. **Abby Bussel** 

- The quirky 12th annual Canstruction design contest hits New York City November 10. The competition invites 35 architecture and engineering firms to spend one night building fantastical structures out of full cans of food; the donated goods are then distributed to the needy in the metro area.
- E→Scott Johnson, a partner at the Los Angeles firm Johnson Fain, has been named director of the Masters in Architecture program at the University of Southern California School of Architecture. The American Society of Interior Designers has announced its board of governors for 2005, which includes Anita Baltimore as president and Robert Wright as president elect. David D. Evans has been named executive director of the Society of Fire Protection Engineers. A longtime engineer and fire-safety researcher, Evans assumed the post earlier this month.
- E>The Royal Institute of British Architects and the Victoria and Albert Museum will open the United Kingdom's first permanent architectural gallery in a museum next month at the V&A's London headquarters. Admission, as at all major English museums, will be free.
- E-Asymptote has won the prestigious Kiesler Prize for Architecture and the Arts. Principals Hani Rashid and Lise Anne Couture received the award, sponsored by Austria and the city of Vienna in recognition of "extraordinary achievement," at a ceremony in Venice, Italy, last month.
- E→The HVAC engineering society ASHRAE has released a new exterior-lighting standard intended for code use, which is hoped to strengthen energy efficiency. In other codes news, the cities of Dallas and Denver have both adopted the International Code Council's "I-Codes" for fire prevention and building safety.
- E-Best known for transportation planning, New York City-based Parsons Brinckerhoff has formed an offshoot, PB Placemaking, to focus on such issues as land-use planning, transit architecture, and urban housing initiatives.



### PARADOX CITY In Tijuana, young architects find inspiration in the city's uncontrolled growth. by Ann Jarmusch

"Tijuana is the ugliest city I have come to know, a filthy city," René Peralta writes online of his birthplace. "In its urban condition, Tijuana is also deformed. But this deformity is what makes it interesting."

An architect, teacher, and frequent blogger, Peralta is one of a band of emerging Tijuana designers, artists, and academics

who embrace the chaos and friction of a city exploding with migration, development, and vibrant but clashing cultures. Small affluent neighborhoods dot the city's old center and the Pacific coastline, while in every other direction thousands of shacks bereft of electricity and running water cling to steep, barren hillsides. As a design laboratory, Tijuana is as provocative as it is dysfunctional.

Peralta's firm, generica arquitectos, rents a small office a short walk from the noisy, frenetic port of entry connecting San Ysidro, California, and Tijuana, where an estimated 7 million pedestrians and 34 million vehicles

cross *la linea* each year. Intrepid street vendors, window washers, and begging children careen toward Mexicans and Americans in SUVs, F-150s, and jalopies creeping north. The circus atmosphere, dampened since September 11, 2001, has always been tinged with desperation.

Peralta is passionately rooted in Tijuana, where his family

has lived and owned businesses and property for 80 years, a history few other local families can match. He and his forebears have watched generations of transients treat Tijuana as a mere steppingstone to the United States. In calling it "the ugliest city," Peralta applies a concept he learned at the Architectural Association in the mid-1990s: Ugliness is born of

excesses and absences. For him, Tijuana is both extremely stimulating and vexing.

#### RUNAWAY DEVELOPMENT

Peralta's city is 17 miles south of San Diego. "Psychologically, culturally, socially, we have always had the world's richest country right next to us," says Miguel Robles-Duran of rhizoma, another young Tijuana architecture firm. "Not only that, we're next to the most expensive state and one of the most expensive cities in the United States. Mexicans want to live like Americans, so developers here copy San Diego [housing tracts]. What's

worse, they make bad copies."

A modular apartment tower by

generica arquitectos (above)

and a house renovation (top)

by rhizoma suggest ways to

reinvigorate the sprawling city.

Perhaps this view helps explain why Nueva Tijuana, the unofficial name for the city's sprawling eastern flank, seems as alarming as the shantytowns to some observers. Gated residential tracts sporting slick marketing signs are big business. Private developers are rushing to meet an unprecedented

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Tijuana is heavy with dust and smog. Bold colors do little to distinguish one housing complex from the next.

housing demand from migrants lured by jobs at *maquiladoras*, the border-hugging assembly plants owned by foreign companies. This latest boom is different: Mexican professionals have joined the throngs of unskilled workers, and some of these new arrivals plan to settle here permanently.

The city's current population surge (estimated at 1.2 million in Mexico's 2000 census, though experts say that figure could be 500,000 higher) is not expected to slow down any time soon. In response, the Baja California state government plans to create 50,000 mass-produced housing units this year and 60,000 in 2005, primarily financed by federal loans and built by private entities. Tijuana's master plan places these housing tracts near the maquiladoras and stretching into the city's eastern outskirts.

In researching a book Peralta is coauthoring on Tijuana, he was astonished to learn that nearly half the city's population now lives in Nueva Tijuana. Housing construction gobbles up more than five acres of land per day, according to local city planners. Some of these developments crudely quote Spanishstyle details, such as red-tile roofs and arched windows. But these cartoonish embellishments are too expensive for most Mexicans, so much of Nueva Tijuana is now sprouting flatroofed, introverted masonry compounds with massive gates.

Gated communities are a justifiable response to Tijuana's high crime rate, Robles-Duran says, which ranges from car theft to neighborhood shootouts. With high walls and locked gates, developers are providing security—along with utilities, schools, and paved roads—that the impoverished government has failed to deliver.

Most of the new tract homes sell for \$25,000 to \$40,000, but for just \$15,000 a family can squeeze into a *micro casa*, a boxy, attached unit of less than 300 square feet. Suddenly, a maquiladora line worker earning \$200 per month might be able to afford one of these tiny, one-bedroom homes, but ownership comes at a psychological price.

"People are going to go mad" in them, argues Peralta, who is also part of Operativa 4, an activist group of designers and artists who hope to infuse humanism and design expertise into this raging phenomenon. However rudimentary they may be, shacks can be expanded at will to accommodate extended families, but most micro casas are literally boxed in.

#### AN UPHILL BATTLE

"Architecture is a luxury here," laments Robles-Duran, who recently left Tijuana to study at the Berlage Institute in Rotterdam. He doubts he and his architect wife, Gabriela Rendon, will return, except to oversee the completion of two private homes he designed that are now under construction.

Other young architects share Robles-Duran's frustration with the city, yet they remain committed to easing its growing pains and elevating its substandard housing. Peralta, for example, hopes to find a new client to revive generica's 2002 design of a five-level, modular apartment tower called the Mandelbrot Building. Commissioned (but not built for lack of funding) for a standard-sized urban parcel, it can be reconfigured for different sites. The Mandelbrot could become a mass-produced alternative to Nueva Tijuana's ominous, two-story housing tracts.

If he could, Peralta would halt the city's runaway expansion and redirect the massive building frenzy into high-density, high-rise housing near work, transportation, and cultural centers. He and his peers might stand a chance when Tijuana's old core is redeveloped, a priority of its city planners. But the architects' chances seem slim in Nueva Tijuana, where thousands of families can buy their first homes and the bulldozers never sleep.

Ann Jarmusch is the architecture critic at the San Diego Union-Tribune.

# TALKING TRASH WITH JULIE BARGMANN

The landscape architect speaks about her process, competitions, and reclaiming postindustrial urban sites. by Bay Brown

Architecture spoke to Julie Bargmann, principal of Charlottesville, Virginia-based D.I.R.T. Studio—the acronym stands for "Design Investigations Reclaiming Terrain"—and director of the landscape architecture program at the University of Virginia, about recent competitions for New York City's High Line master plan and a landfill regeneration project in Tel Aviv, as well as the challenges of conveying the idea of design as process. A prolific designer, Bargmann has also recently collaborated with architect William McDonough on the revitalization of the Ford Rouge Center (May 2004, page 52) outside Detroit and with architect Gary Cunningham and the Mesa Design Group on the conversion of a 1915 pump house into an art space in Dallas.

**BAY BROWN:** How did you become interested in landscape architecture?

JULIE BARGMANN: When I started feeling frustrated and confined by being a studio artist, not only physically but also conceptually, that's when I started to look around at how my work could be more in the public realm. I didn't think, "Oh, gee, I should be a public artist." I realized I was very interested in the medium of the landscape. A lot of my early work was with dirt, actually. When someone said to me during my "black hole" period between art school and design school, "What about landscape architecture?" I said: "What?"

I looked into it and entered the program at Harvard's

Graduate School of Design. Then-junior faculty member Michael Van Valkenburgh with whom I have had a wonderful reunion on the competition for the High Line [the disused elevated rail line that runs along

Manhattan's West Side]—was a very early influence and supporter. The most important thing I heard from him and other designers was: Don't stop being an artist.

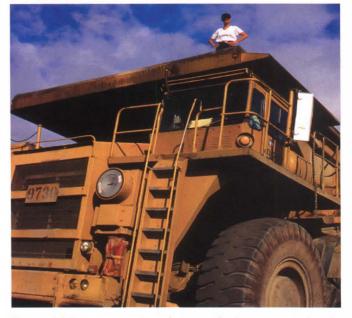
BROWN: Do you consider yourself a public artist today?

**BARGMANN:** Well, I don't know. Some people call me a "landscape artist," but I am very proud to be a landscape architect who addresses projects in an artful way. I consider some of the best landscape architects to be artists. The difference is pretty practical; it gets down to education. I very much enjoy the science and technology of landscape architecture.

**BROWN:** The High Line master plan D.I.R.T. submitted together with Michael Van Valkenburgh, Beyer Blinder Belle, and Architecture Research Office—was not chosen. What did you learn from the competition?

**BARGMANN:** It was devastating; I felt like I lost a childcustody suit. I love that place. What was disheartening to us

⇒ The big revelation for landscape designers now is that form is not just a noun, it is also a verb.



Seen visiting a taconite—low-grade iron ore—mine in Minnesota, Bargmann likes to get her hands dirty.

was that we may have failed to clearly convey our project to the steering committee. It was hard to explain the complexity and subtlety of our proposal. We tried to explain a process, rather than a product. And that is tricky. In our submission we said that the process equaled the project. But if you want to show design as experience or as process you face the question of how to represent it. How can images evoke a visceral—and also conceptual—experience? This dilemma is directly related to our project because that is what the High Line is all about: a sublime, yet very subtle experience. How do you show that? We were even joking about making a "sense-orama" flipbook, complete with smells.

**BROWN:** Is this approach what makes your studio unique? **BARGMANN:** I think my contemporaries are in a very similar

> place, dealing with processes of design and processes of the landscape and how to communicate them, manipulate them, and orchestrate them. But often an audience says: "What does it look like?" And we

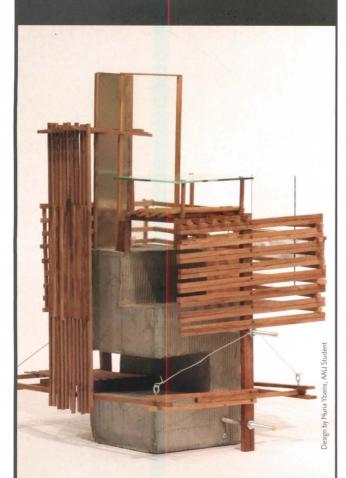
reply: "Well, we can make our best guess." That is where ecology becomes interesting, because we can look at how ecological processes are represented and how they are predicted. We don't want to stop there though and mimic those processes, so we ask: "How do those processes crossreference with cultural ones? And what does that look like, and what does that look like over time?" The big revelation for landscape designers now is that form is not just a noun, it is also a verb. I think that realization has opened up another realm of collaboration because other expertise is needed.

**BROWN:** How does your work differ from that of your contemporaries?

**BARGMANN:** All said, my work is really not that different. I may just have a bigger mouth and, in particular, I have become obsessed with industrial processes. As far as I am concerned, I don't differ much from Dead Fred, Frederick Law

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#### **PROGRAM IN ARCHITECTURE**

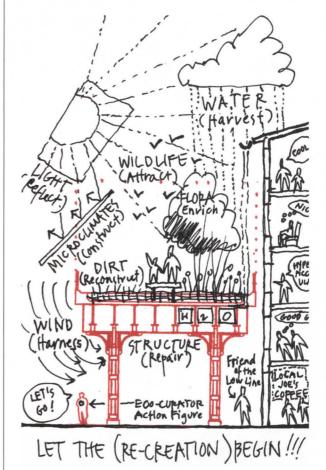
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#### For Bargmann, the High Line competition presented the challenge of how to visually express design as an incremental process.

Olmsted. I think Robert Smithson's reading of Olmsted was right on: Olmsted was a process dude. He understood that the landscape was a dialectic. I have been speculating-along with other cultural thinkers-that if Olmsted, as according to Smithson, was working with the dialectic of the sylvan and the industrial, then ecology and technology is our current dialectic. The question becomes: "How do you construct that dialectic in the landscape?" I find that projects I am interested in deal with technologies of the past and how technologies of the present-mainly remediation technologies-deal with the byproduct of those previous technologies. And then when you put that into the future, those same ecotechnologies also deal with contemporary urbanity and industries. BROWN: What are "ecotechnologies"?

**BARGMANN:** Basically, biotechnologies: all the incredible research and innovation on storm-water management, energy systems—very cool stuff— along with remediation technologies, of course.

I am currently doing a competition for the regeneration of a landfill in Tel Aviv. The project basically reframes a mountain of trash as a resource. The client already has some of the most innovative technology in place, but they still need a push. And if you go with some of the more progressive technology, it is risky.

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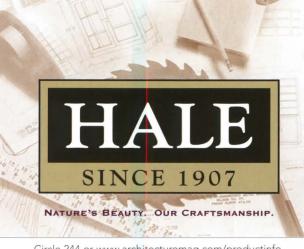
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The raw power of the High Line as a "wildscape"—a naturally occurring vegetated crust on an elevated rail bed-prompted Bargmann's team to avoid formal ideas of landscape-making.

BROWN: What are you proposing for the site? BARGMANN: Our team is looking at how this mountain of trash, called Hiriya, can be a recycling park: a public park with plenty of room for habitat gardens, playing fields, a civic event space, a dramatic city overlook-the works. At the base of the mountain, the ongoing waste and recycling operations are also conceived as a park-a productive one where it becomes a resource, making fuel, methane. And folks can witness the processing of tons of waste coming into the facility. There will be a visitor's center, watertreatment wetlands, a soil-treatment farm, and a native-plant nursery. It is very cool that they are not shipping the waste elsewhere.

Landfill owners usually cap and entomb the trash so it stays there forever. Instead, we are suggesting a "capillary cap," which allows water to percolate through the trash creating leachate, which accelerates the decomposition of the waste so it turns the moun-

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With landscape architects Ken Smith and Laura Starr, and artist Mierle Ukeles, Bargmann has created a proposal for the regeneration of a landfill in Tel Aviv (above and right). It will still process waste, but also be a park.

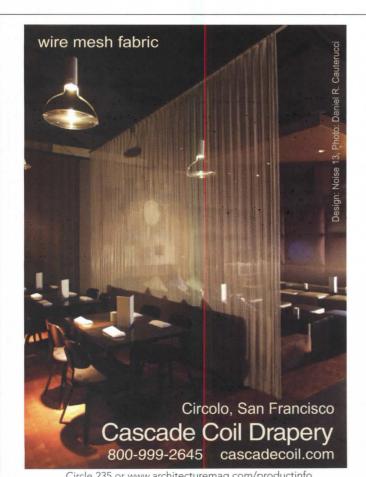
tain into a big pile of compost. Potentially as little as 5 percent will have to be landfilled. Conventionally, leachate is collected and then hauled off site to be processed at a wastetreatment plant. Our team is saying that this is a productive landscape, not a wasted one. We have had meetings with rabbis to try to create a poetic dimension to the project. We have been trying to understand the Jewish faith and Israeli culture so the project will resonate with people. It could potentially be insulting because we are talking about trash here.

**BROWN:** Is this a paid competition?

**BARGMANN:** Chicken feed. Same for the High Line, too. **BROWN:** Do you do a lot of competitions?



**BARGMANN:** I have pretty much sworn off competitions at this point. My energy could go elsewhere in creating projects. I would rather find some communities that need help and bleed for them a little, rather than bleed for a bunch of developers or city agencies who are just trying to suck the life out of designers. If you hear some resentment in my voice, there is a lot. It is totally abusive and it is free design services. Until a lot of designers refuse, everybody is going to keep doing it. Where are the good clients out there who are saying "I have an RFP which requires you to be innovative, critical," and so forth. That is what we need: critical RFPs, not competitions. So there,



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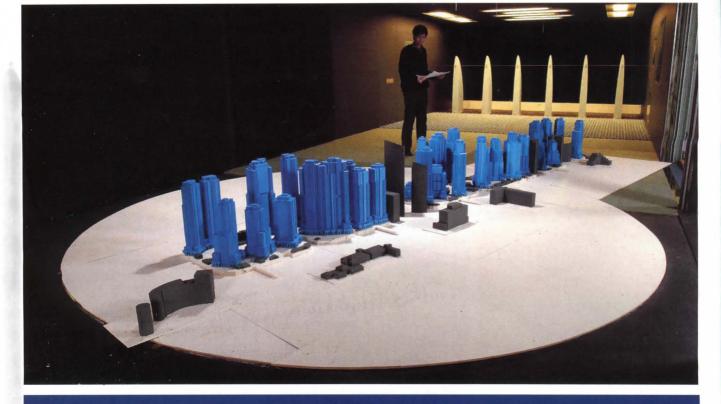
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# WINDS OF CHANGE

The aerodynamics of tall buildings have gone from afterthought to design driver. by Jamie Reynolds

Until a few years ago, in his wind-tunnel work at BMT Fluid Mechanics, Volker Buttgereit often had an unenviable task. "We've been the bearers of bad news," Buttgereit says of the past. "Years ago, we would have been involved in the late stages of design, once building massing had been arranged." The wind engineer and his colleagues' analysis of a speculative skyscraper's aerodynamics could detect anything from stomach-churning lateral swings to unbearable ground-level gusts in the finished product.

But now the Teddington, Englandbased engineering firm, one of perhaps a half-dozen facilities in the world that offers wind-tunnel analysis of buildings, is seeing architects and engineers approach them much earlier in the design process. There and at other laboratories, practitioners come looking for critical information about their tall structures that will not only inform the sway of a tower or the risk of downdrafts at ground level, but also the potential for energy and cost savings and its very expression. Today, instead of being one of the last considerations of a tower's massing, says Buttgereit, "We apply the wind tunnel early on as a design tool."

#### ⇒ Wind-tunnel testing can translate into massive economic savings, sometimes on the order of 40 to 50 percent in planning costs and 20 to 30 percent of a façade price.

"For buildings of 50 stories or higher, it becomes the controlling design factor for the structure," says Ron Klemencic, a partner at Seattle engineering firm Magnusson Klemencic Associates, of wind-tunnel testing. Working with Chicago firm Solomon Cordwell Buenz & Associates (SCB) on the 62-story tower at 340 East Randolph in that gusty town, Klemencic had the Windy City's ample airflow conditions to factor into the design. In response to the aerodynamic analysis of the initial scheme, says SBC project architect Martin Wolf, the design team found that "the proportions of the tower were of such a high ratio that we had to do quite a bit with the organization of the structure."

#### **TUNNEL VISIONS**

The initial concept for 340 East Randolph was brought early on to Tom Edie, director of operations at the renowned Boundary Layer Wind Tunnel Test Laboratory (BLWTTL) at the University of Western Ontario in London, Canada. Though affiliated with the college, the lab takes on about 40 or 50 commercial cases a year, racking up a portfolio of work that includes Chicago's Sears Tower (1976) by Skidmore, Owings & Merrill (SOM) and I.M. Pei's Bank of China Building (1990) in Hong Kong.

"Architects send us some preliminary information on what they're building,"

A technician checks the placement of scale models in a wind tunnel at BMT Fluid Mechanics in Teddington, England. The testing done here increasingly affects architects' decisions in the early stages of high-rise design development.

says Edie, "and we construct a scale model." Usually rendered between 1:200 and 1:500 of the actual edifice size, the model is placed in a wind tunnel, along with models of existing adjacent buildings-and, often, planned nearby structures-and covered with a bevy of sensors, sometimes up to 1,000 of them. Factoring in local meteorological conditions, technicians then apply the set-up to a variety of tests. An area load test, for example, checks the wind pressure on various parts of the facade; an aeroelastic test determines how much the building moves and the effects of applying stiffening or damping elements. A pedestrian-level wind test predicts gusts at the street or in plazas, determining whether fountains will spray wildly in breezes, whether plants or screens should be used, or if more radical design changes need to be incorporated. Unlike the wind-tunnel test of an airplane or car (which measures a steady, average flow of air), the boundary-layer tests apply variable conditions, simulating two hours of storm-level wind.

#### SOLIDIFYING SOLUTIONS

In the past, if building designs threatened to be adversely affected by wind, architects and structural engineers simply reinforced the structures to make them stiffer. "We threw more materials at the building," says Klemencic. Now, with the data in hand from the tests, practitioners can make subtle-and sometimes not so subtle-alterations to the original tower scheme in the design process. Using façade elements (holes, corners, and elaborated surfaces) and, in extreme cases, external guy wires, architects can factor in ways to control wind vortexes earlier. "The more you can disrupt those forces slipping across the building the better off you'll be," says Wolf.

At the SOM-designed 7 South Dearborn (2000), another Chicago structure, setbacks were totally defined by wind-tunnel testing. At the top of C.Y. Lee's Taipei 101 (2003), the world's tallest building, at 1,671-feet, counters wind effects with a tuned-mass damper, a concrete pendulum at its apex. (This device is easily viewed and has actually become part of the tourist appeal of the tower.) The original World Trade Center



The Solomon Cordwell Buenzdesigned 340 East Randolph tower in Chicago, slated for completion in 2008, underwent a battery of aerodynamics tests that affected the building's orientation, massing, and balcony configurations.

twin towers by Minoru Yamasaki (1973) employed a viscoelastic damping system, composed of some 12,000 bits of Scotch-tape–like material.

Residential towers require stricter design criteria than commercial ones though, especially when it comes to countering building sway. "The overall movement is one thing, the sensation is another," says Wolf. Adds Klemenic, "In an office, if the building sways, you can always go home."

#### HARD MODEL TO HARD DRIVE

Often, computer information from the wind-tunnel test is fed into a computational fluid dynamics (CFD) application. "Generally, they're complementary," says Buttgereit of the physical and digital modeling systems. The next frontier in wind testing, CFD allows technicians to factor in a variety of conditions not testable in the tunnel, such as rain.

"Those of us who are old-school still like to see the physical test," says Klemencic, citing CFD's limitations. But the wind tunnel is for external studies such as effects on the envelope and surrounding environment, says Edie. Because of its effectiveness at measuring internal airflows, CFD can help inform M/E/P and energy-efficiency studies. "There is a lot of interest in natural ventilation systems that can be wind-assisted," says Buttgereit. "It's not unusual for us to do wind-pressure tests where we advise on favorable arrangements for these ventilation systems."

Which isn't to say "old-school" windtunnel testing doesn't inform green considerations. The placement of wind turbines—to be a prominent part of the Daniel Libeskind and SOM-designed Freedom Tower in Lower Manhattan that will provide much of that building's energy needs—are fixed by factoring prevalent wind, local microclimate, and hemispherical information into model testing.

#### THE BOTTOM LINE

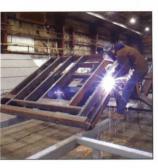
BMT is working on various projects, including a 1,000-foot tower in Dubai that would be the tallest residential edifice in the world (with an 11:1 aspect ratio) and a tennis stadium project with a retractable roof that is being tested with eight different configurations.

Buttgereit sees his field as very much a growth industry, having emerged from largely a research-based endeavor to a field that is now deeply enmeshed with engineering, architecture, and even urban planning. That and the fact that designers have "reached the level [technologically] where they can readily react to design decisions," he says, means the study of aerodynamics in high-rises will only further embed itself into the design process.

This often translates into massive economic savings, he says, sometimes on the order of 40 to 50 percent in planning costs, and 20 to 30 percent on the price of a façade system. "It becomes a value-engineering exercise," he says. This, perhaps as much as any other factor, has designers, engineers, and developers employing aerodynamics as a fundamental design tool.

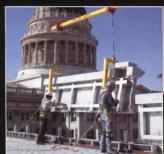
# KEPCO+

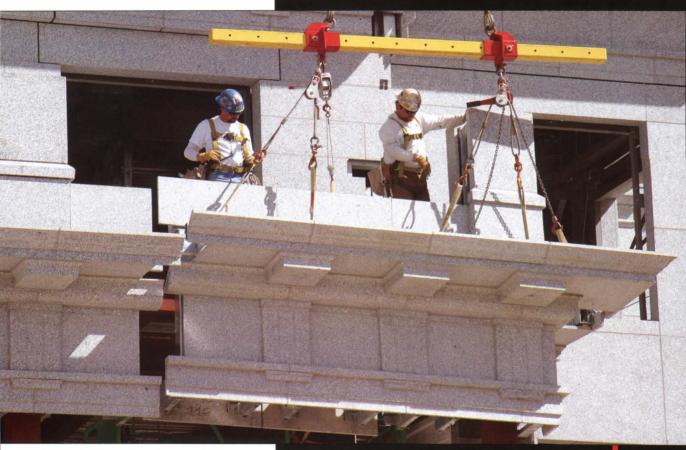
#### Architectural Cladding Systems











# Classic Details

Nost panelized cladding systems are commonly ssociated with flat wall veneer incorporating ttle architectural detailing and fairly straight-forward rofiles. However, KEPCO+'s innovative design echnology allows stone and tile to be panelized on lmost any structure, even those requiring intricate etailing. When planning a two building expansion, the tah State Capitol Preservation Board was intrigued by ne quality control, seismic response, and schedule nhancements offered by panelization, yet concerned ith the system's ability to realistically incorporate the roject's ornate cubic detailing.

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# modern installation

After a successful design build collaboration, KEPCO+ created a unique cladding system that allowed 80% of the building's exterior granite to be panelized. The steel trusses were fabricated in KEPCO+'s climate-controlled facility, then galvanized for durability. The coated trusses were then returned to KEPCO+'s cladding assembly plant where the highly-detailed granite was back-anchored to the trusses. The completed units were then caulked and stored until the steel structures on each of the two buildings were ready for stone-clad panel installation. KEPCO+'s innovative cladding solution successfully incorporated the project's intricate cubic detailing while still adhering to all schedule, budget, and seismic criteria.



# A ZAGAT GUIDE FOR ARCHITECTURE FIRMS?

A website rates employee experiences at 500 firms. by Bay Brown

**Ever want to tell your boss where to go?** If so, Stephen Simon has a venue for you to get a few things off your chest. "Actually it is not about interns bashing their bosses," Simon says of insidearch.org, the website he launched to rate work experiences at architecture firms. "People make candid comments they probably would not tell their bosses in yearly reviews, but would be happy to say anonymously."

Simon started the site in 2002 in response to his own job-

hunting. After earning a B.Arch. from Carnegie Mellon in 1994, he found it difficult to get information on what it was like to work at different firms.

While Simon manages the site almost singlehandedly and pays a mere \$50 a year for hosting, his URL has the potential to blackball a firm. Insidearch.org's main feature is its database on more than 500 firms. Reports are created when current or former employees of a given firm fill out an online survey

> describing their experiences. Evaluations rate and discuss professional development, employee caliber, work environment, overall experience, management skill, design quality, work hours, compensation, and attitude toward interns.

> From the job seeker's perspective, the most important issue is how substantial their role will be, according to Simon. Will they be involved in designing or mere "CAD monkeys" sitting in a corner drafting? Most are seeking a collaborative, creative environment, and want to be taken seriously, he says. Site visitors also want to know how much interaction there will be with senior architects. "They don't want to just be picking up redlines with a couple of other interns," says Simon.

> Initially, there was concern that random reputation bashers or firm-promoting principals might post fallacious surveys skewing the system, but Simon, who moderates the site, says this has been a rare occurrence.

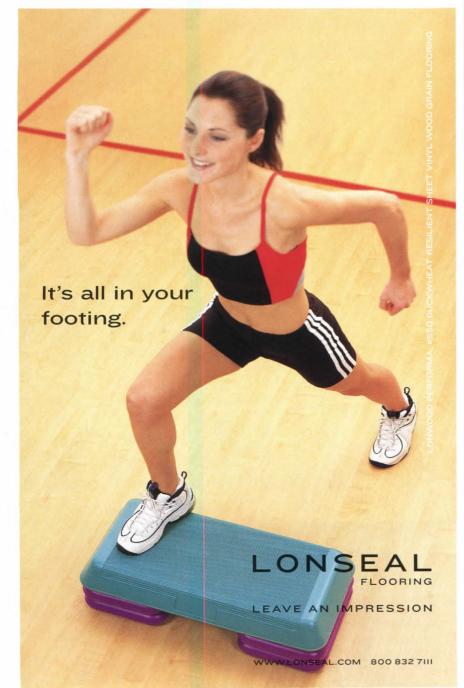
> While it provides a direct benefit for job seekers, the website is also of interest to firm principals, who can read the surveys to better understand employee needs and concerns, Simon argues. "They learn that maintaining a happy staff is not just about money or position, but much simpler things.

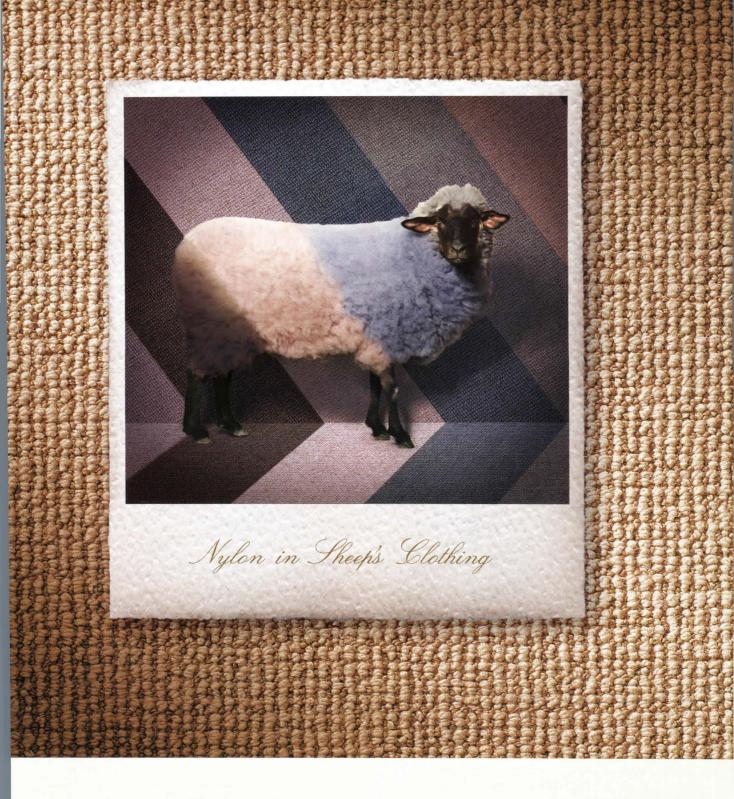
> "It would be great if someday principals advertised their insidearch.org rating to potential employees," he hopes. "In job interviews, they could guote their rank."

> Recently relocated, Simon is now in the midst of a job hunt himself and is using the resources of his own site.

> To see the current top ten firms, visit www.architecturemag.com.







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### TO MARKET, TO MARKET BY DAVID M. GRANT

firm

Marketing for architects has undergone an astounding revolution. Not too long ago, it was literally illegal. But even after the Supreme Court, in the late 1970s, allowed professional service firms to promote themselves, many still considered it unethical and tacky.

Those days are gone, and marketing has morphed into an essential tool. From law firms to architects, more companies now use marketing to distinguish their work from that of the competition. Indeed, marketers have become such an integral part of many architectural firms that, in some cases, they've even been made partners.

Some traditionalists still harrumph if they learn that an architect has taken an advertisement (even a modest one) or—gasp!—hired a public-relations firm, but such people are becoming as extinct as designers who prefer pencils to computers. For example: In the past two years alone, as many were drastically cutting expenses, firms growing by 20 percent or more annually had increased their marketing budgets by an average of 33 percent, and firms growing by 1 percent to 19 percent annually boosted their marketing outlays by about 18 percent, according to a study by the Society for Marketing Professional Services (SMPS) in Alexandria, Virginia. And the increased outlays have obviously produced results: the time," recalls Joseph Lengeling, a principal in New York City–based Magnusson Architecture and Planning, a 20-plus-employee firm. "Before that, getting out a proposal was like a hurricane running through the office; few were left untouched. Our presentations were not well edited and did not speak well of how we really envisioned our work and ourselves."

"The idea of having a marketing professional as an integral member of the firm's management team is gaining momentum," says Sally Handley, former president of the New York City SMPS chapter and coauthor of the book *Charting Your Career Path: Opportunities for Professional Service Marketers in the 21st Century.* "It's a race, and the firms that work with marketers and include their entire staff in business development, are the ones that will come in first."

#### A LITTLE P.R. ON THE SIDE

And an increasing number of architects, like Magnusson Architecture and Planning, are retaining or hiring publicrelations specialists. The major impetus can be summed up in two words: It works. For example, after New York City project manager Kenneth Levien was the subject of a lengthy profile in *Crain's New York Business* magazine,

I Firms with annual revenue growth between 2002 and 2004 also expanded their marketing budgets during that period. And more of those practices now treat marketing as integral to firm governance, with an increasing number including a business-development professional on their management team.

Firms with annual revenue growth between 2002 and 2004 also expanded their marketing budgets during that period, according to the Natick, Massachusetts-based business consultant ZweigWhite.

#### A DIFFERENT KIND OF MARKETING

Not only has the use of marketing among architects radically expanded, but its nature has also changed substantially, says Ron Worth, chief operating officer of SMPS. "Continuity of work, finding profitable niches, and segmentation of clients are all mandatory for success in today's competitive market," he explains.

"More and more marketers are using the Internet to manage ongoing research for their firms—to keep them at the forefront of the industry, while guiding their organizations with strategic initiatives formulated with the information they have regularly funneled into their computers," Worth believes. "And now competitive intelligence-gathering is a given, to monitor market trends, competitor activities, and client goals—all meant to ensure a constant foothold for their firm's position and perception in the industry."

"One of the first pieces of advice we received from our business advisor was to bring a marketing director on staff, even though it was a big-ticket overhead item at his firm Levien & Company received so much new business that he had to expand his staff by some 30 percent. "What's more," Levien points out, "being quoted so often in the media gives me a leg up in hiring and retaining. Good people want to work for firms that are favorably mentioned in the media."

Clearly, many (and probably most) design firms across the country concur: SMPS membership increased from about 3,500 in 1990 to more than 5,600 members today, despite the current recession, according to Worth, who reports that the professional society is now growing at a steady rate of 6 percent to 8 percent a year.

In short, the minimal marketing approach long used by architecture firms is quickly becoming a practice of the past. Even the old-timers have come to realize that developing a growing business is directly related to aggressively embracing the marketing function. More and more, the most successful firms include designers and marketers who work together in understanding business development and the entire process of bringing in and retaining clients—not just producing quality work.

David M. Grant is president of LVM Group, a New York City-based public-relations firm specializing in the real estate and design markets.

#### on the boards

#### BEHNISCH, BEHNISCH & PARTNER | SPA COMPLEX | BAD AIBLING, GERMANY

Forty miles east of Munich, in the 1,200-year-old town of Bad Aibling, a new thermal-spa complex is set to rise by late 2006. Designed by Behnisch, Behnisch & Partner, which has offices in Stuttgart, Germany, and Los Angeles, its undulating landscape of domed therapeutic facilities recalls the space-age aesthetic of the early 1970s. A series of "cabinets," as the architects refer to the spa's glazed and partially glazed dome enclosures, hold pools and lounge areas for children and adults; a beauty and wellness center; and a meditation hall. The project is healthy for the body and mind as well as the natural environment: The sustainability-focused architects have incorporated a wide range of green features, from solar-assisted heat and power and a shower water heat-recovery system to rainwater diversion for planted areas and roof-mounted photovoltaic cells. **Abby Bussel** 



#### → RUR ARCHITECTURE | ALISHAN MOUNTAIN TOURIST ROUTE | TAIWAN

After winning an international competition, New York City–based architects Jesse Reiser and Nanako Umemoto have unveiled their design for a tourist route across the Alishan Mountain region of Taiwan. This site, commissioned by the country's Forestry Bureau, is part of an effort by the government to double tourism to the region over the next three years. The centerpiece of the two-part site is a historic railway line connecting the base of the mountain to a location more than half a mile into the mountain range. The railway, one of only three such climate-hopping train lines in the world, is over 50 miles long, starting in the tropical areas of Taiwan and moving up into the temperate and finally arid regions of the country. The lower site features a pedestrian bridge, a 7,200-square-foot redesigned station, and a viewing platform—a delicate looking, seemingly geodesic construction of glulam beams. A 7,000-square-foot community center and restaurants featuring local cuisine serve as pylons for the viewing platform. The upper site includes a hostel and an 8,600-square-foot train terminal. Construction begins in spring of 2005 and will cost an estimated \$14 million. **Katie Gerfen** 



exploded site diagram



#### JOHN RONAN ARCHITECT | GARY COMER'S YOUTH CENTER | CHICAGO

Gary Comer, the founder of Lands' End, grew up in the Grand Crossing area of Chicago's South Side. Through philanthropic enterprises he is working to revitalize the neighborhood, which has seen a rise in crime and high-school dropout rates in recent years. Scheduled for completion late next year, his new youth center, designed by local architect John Ronan, is to provide a permanent home to the South Shore Drill Team—a performing-arts group founded in the early 1980s for kids aged 8 to 18—and other arts and educational programs operated by local organizations. Sitting on nearly two acres, the 80,000square-foot building is marked by an LED-topped tower that announces programs and performances to the community. The steel-frame structure is clad in fiber-reinforced cement panels, corrugated and perforated stainless steel, aluminum composite panels, glass curtain wall, and channel glass. Sustainability is central to the design: The roof over the main gymnasium a space that converts into a theater for 600 thanks to a deployable seating system—is planted with prairie grass, wheat, flowers, and vegetables to both reduce the heat-island effect and serve as a learning laboratory; operable skylights provide natural light and ventilation; and site water is managed through both porous and recycled paving materials. **Abby Bussel** 



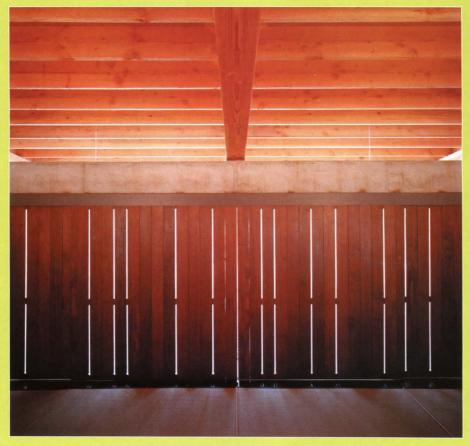
#### → SMITHGROUP | NREL SCIENCE & TECHNOLOGY FACILITY | GOLDEN, COLORADO

Connected by elevated bridge to its mother-ship research center, the National Renewable Energy Laboratory's \$30 million expansion is a living experiment in solar technologies. Scheduled for a 2006 ribbon-cutting, the new building centers on a "process development and integration" facility: 11,000 square feet of clerestory-illuminated highbay and modular labs devoted to the study of thin-film photovoltaics. Such installations, however, are notorious energy hogs, so NREL takes pains to reduce demand by about 40 percent as compared to baseline labs. Work and



circulation areas are naturally lit and have photosensor-controlled dimming, and brises soleil protect perimeter corridors from overheating. M/E/P systems include displacement ventilation in the offices via underfloor HVAC distribution (there are no ceiling registers), as well as energy recovery for lab exhaust air. The two-story, 72,000-square-foot mass is partially tucked into its mountainside site to further reduce energy draw. Primarily of precast concrete colored with local aggregate, the building has a conical lobby clad in zinc panels with slots that train daylight on a solar calendar etched into the floor. **C.C. Sullivan** 

# here comes the sun



In a 1916 correspondence to a friend, Georgia O'Keeffe wrote, "Tonight I walked into the sunset." Although composed more than two decades before she began to spend summers painting in New Mexico, the artist's transformative moment echoes the design of the Center of Gravity Foundation Hall, a Zen Buddhist teaching and meditation space high in a mountain valley of the state's northern expanse. From the darkness of 3:45 a.m., when meditation and chanting begin, to the first light of dawn a few hours later, to the sun's descent at dusk, the building's porosity attunes students and teachers to the cyclical life of the sun. With a simple composition of wood, poured earth, and polycarbonate, Predock Frane Architects, a young firm based in Santa Monica, California, has tied the daily ritual of the natural world—the rising and setting of the sun—to the rituals of transcendence.





# A SMALL MONASTERY BY PREDOCK FRANE ARCHITECTS CAPTURES THE ZEN OF ZEN.

BY C.C. SULLIVAN PHOTOGRAPHS BY JASON PREDOCK

New Mexico's Jemez Mountains, a swath of rugged canyons and colorful wooded peaks, stretch north of Albuquerque and west of Santa Fe, New Mexico, dotted with small towns and ancient Pueblo Indian dwellings. Jemez Springs, a modest but healthy hamlet in its southern reach, lies along a loud creek near an extinct volcano, which accounts for its bubbling hot springs, one reason for the town's trickle of tourists. This settlement has also served as outpost for some noteworthy religious orders. In the sixteenth century, Franciscan missionaries ran roughshod over the Pueblo people, building atop their village. More recently, Catholic groups with curious names—Servants of the Paraclete, for example, and the Handmaids of the Precious Blood—have set up base in the valley. And, since 1973, so has Bohdi Manda, a Zen Buddhist compound established by a Japanese master, Joshu Roshi, who is now 97 years old.

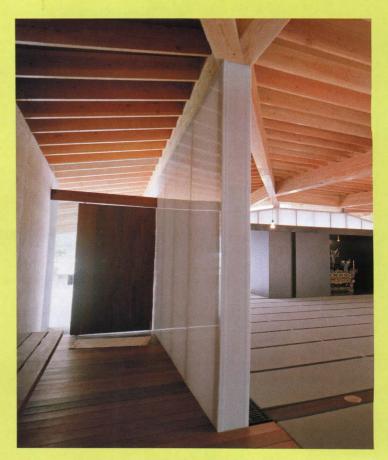
At the end of summer, Jemez Springs is cool and starflecked at night, and warm and bright most days. (For seven years now, the state has been in drought, but it doesn't show in this lush, hummingbird-infested dale.) A few buildings stand out in the landscape; one is the Zen center's new *dharma* hall, or foundation hall, a public place where the monastic and lay worlds meet. It is a platform for Buddhist ceremonies and training, as well as weddings, baptisms, and







The new teaching and meditation hall for a Zen Buddhist center in northern New Mexico sits in a striking valley with geothermal activity. A folded metal roof plane caps the space, defining an exterior path for walking meditation (facing page). Conceptually, two embracing boxes—one of heaviness (rammed earth), and the other of lightness (polycarbonate on laminated-strand lumber)—define the transition from exterior to interior. Monks and students "slip" between these planes as they enter the hall (below right).



funerals. Its shell is exceptional: In ways both formal and experiential, the design transforms New Mexican light and earth to reflect the ritual life of Bohdi Manda.

5:15 a.m. Under a bright three-quarter moon, the foundation hall is easily visible. From the main canyon road, passersby glimpse a framed view into the hall, through a low, 36-foot-wide set of sliding wood doors. For an hour and a half already, meditation and chants have been underway. A few black-robed students sit on black cushions set in an orderly, 3-foot grid of rectangular tatami mats, next to drums and a gong. The donai, or students, occupy the north side of the room, and in the center-the Buddha space-is the "high seat," a large wooden chair left vacant for Roshi's eventual return. To the south is the joju, or teachers' area. And to the west, a triptych of recesses built from darkstained wood functions as an oversized butsudan, or Buddhist altar, which, like the door, faces east toward the spiritual nexus of the faith in Asia. The votive areas contain an antique Japanese butsudan, some Chinese furnishings, and a Buddha and other religious figurines.

**6:35 a.m.** Dawn is breaking. A glow, and then direct sun, hit the westerly flank of the canyon, giving acid life to its cliffs of travertine and ruddy sandstone. The fast-brightening day-light translates into another glow inside the hall, in part from its glass clerestory and open front door, but mostly from the full-height polycarbonate walls on laminated-strand lumber enclosing its western half. It's bright enough to turn off the exposed light bulbs hanging from looped black cord. Above them, large glue-laminated roof beams converge in a dominant symmetry, supporting 2-by-12-inch wood purlins running perpendicular to the main axis. A sweet incense burns on the altar.

7:00 a.m. Breakfast is held in silence in the *kuri* (kitchen) next door, in one of the original tin-roofed wood cabins that once housed a boy-scout camp and a 100-year-old church, the latter now used as the *zendo*, or meditation hall. Like their new minimalist neighbor, these multipurpose buildings have gabled roofs of corrugated tin or steel—the norm in this hail- and snow-prone region—supported by narrow, exposed timbers. But where the older facilities are built upon stuccoed cinderblock and stone, the hall is cast in 26-inch-thick slabs of poured native earth and aggregate, sandblasted to a smooth finish. And rather than exposed log timbers, stout glulams support the long eaves that protect the building—and students engaged in *kinhin*, or walking meditation—from sun and precipitation. Still, the newcomer works hard to fit into its context.

The students and the vice-abbess, Jiun Hosen Osho, eat boiled eggs, granola, and orange slices, and then clean their bowls at the table. It was Hosen—an energetic, warm Montreal native who has taught here for 25 years—whose initiative led to the building of this half-million-dollar project. Her influence is everywhere: in its layout, for example, and in the double-sloped roof, which she felt was more in keeping with the Jemez Mountains vernacular than the architects' initial idea, a simple shed plane. Most Zen monasteries in the United States adopt literal Japanese imagery, explains Hosen, or simply occupy found structures, not seeking to explore their space. The Bodhi Manda foundation hall, while exuding a Palm Springs mod, conforms to traditional monastery planning and proportions inside.

**7:50 a.m.** The first rays of direct sun break over the east ridgeline and, upon hitting thin glazed slits in the sliding wood doors, reflect about 60 degrees northward and mark the floor with luminous beams that appear one at a time as the sun moves. Outside, the earthen walls brighten considerably, picking up the colors and textures of the canyon slopes; now it's harder to see from the road what's happening beyond the dark wood doors, which adds some intrigue. According to Hosen, this entrance remains open and unlocked for five months straight each year.

**12:00 noon** Strong afternoon light penetrates the layered translucent walls, and the foundation hall interior glows brightly. Its equalizing ambient light illuminates the faces of a couple that has come here to wed after 25 years together; while they are friends of Bodhi Manda, they are not Buddhist practitioners.

Neither are the architects of their temple, the Los Angeles-based team of John Frane and Hadrian Predock (son of Antoine), although they have worked on similar facilities for Buddhist retreats in the Mojave Desert and in Crestone, Colorado. But it didn't matter either way to Hosen; she simply sought an architect who wouldn't be "fixated" on anything. And for Frane and Predock, their client's honest naïvete opened doors. "It was more intuitive than working with typical clients," says Predock. "They said, 'Here are the rituals that take place here; how can we frame them?" Owner and architect considered some temple typologies in Japan, such as the tourist-attracting Ryoanji in Kyoto, with its famous Zen garden. They shaped a master plan with elements of Japanese monasteries: meditation halls, a cemetery, and dormitories. The compound's first new structure, the foundation hall, would be sited to create a central green space bounded by the zendo, the kuri, and the foundation hall. The resulting introverted garden is highly typical of a Buddhist monastery.

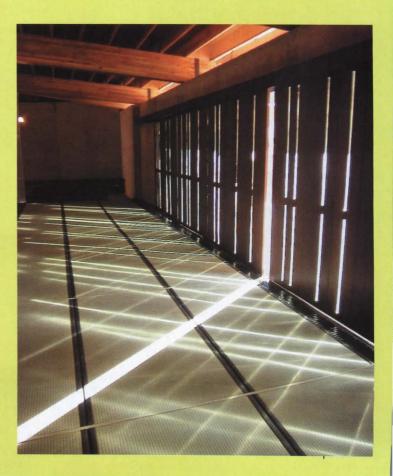
1:30 p.m. Twenty miles away from the Bodhi Manda, the sun peaks over a bowl-shaped valley-actually the crater of a collapsed volcano-called Valles Caldera, where steam rises from pools of earth-heated water. To the east, twelfthcentury cliff dwellings vie with the U.S. Department of Energy's off-limits "tech areas" in Los Alamos to summon greater intrigue. For years, the DOE has studied ways to harness geothermal energy from the caldera, and for decades the buildings at the Bodhi Manda have piped hot-spring water through simple radiators for winter heat. For the new foundation hall, a more technical (and efficient) solution was employed: Just behind the Buddha altar, framed in the same dark wood, is a tidy mechanical room housing a pint-sized heat exchanger that warms a glycol loop for a perimeter heating element. According to Hosen, the Zen center spends about \$30 per month to heat all six of its buildings.

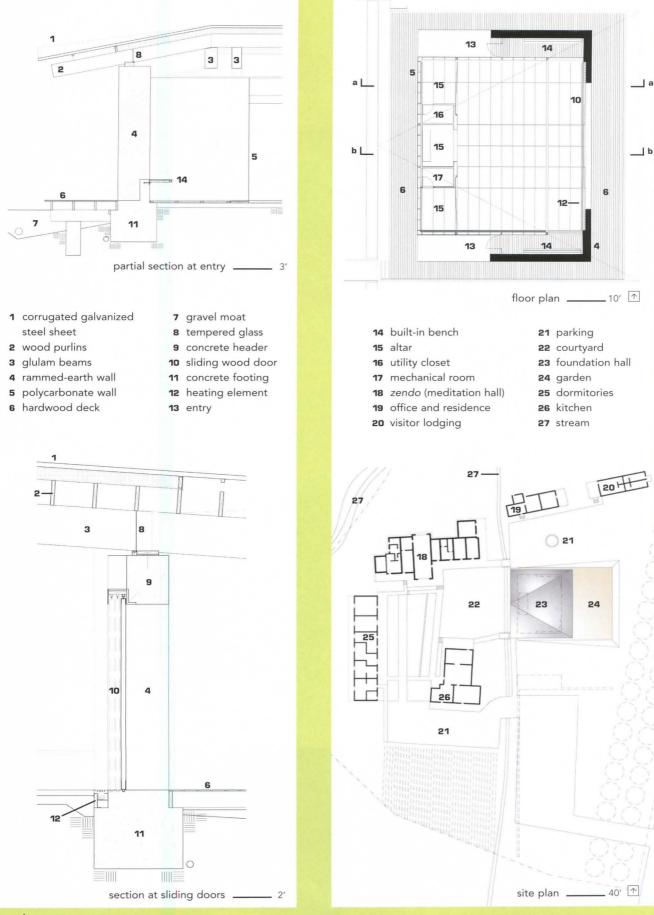






Traditionally, the *dharma* hall, or foundation hall, is the place where the monastic and lay worlds meet, and is used for teaching, meditation, and *sutra* chanting, as well as weddings and funerals. Centered on a grid of tatami mats, a *butsudan*, or altar, is framed in black-stained oak veneer that also encloses utility closets (above). On the eastern wall, sliding panels open to a 36-foot-wide framed view of a garden and mountains beyond (left and below right). A built-in bench lines the entry areas (below left).





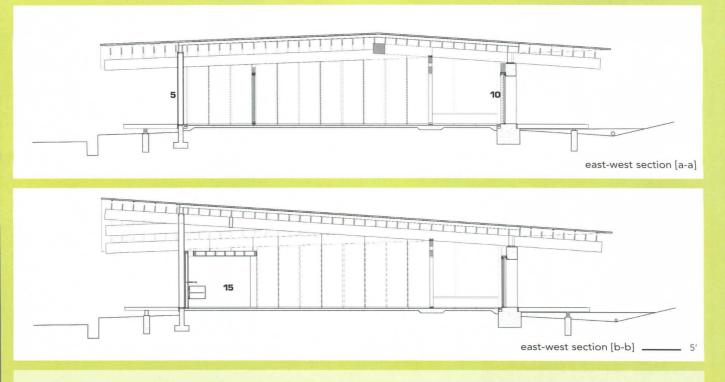
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**5:30 p.m.** Inside the foundation hall, the glow from the afternoon sun is starting to subside. Hosen, in her office that looks out toward the new building, busily fields phone calls from students and visitors. It was Hosen who encouraged Roshi to build the hall, and in the process, the pair unwittingly became patrons of a promising, emerging architectural practice. Stepping over the gravel moat and onto the Brazilian hardwood deck that encircles the foundation hall, she seems to breathe in the structure. "These beams are so perfectly positioned. I cried once last winter, because I was scared for the roof: We had 18 inches of snow—wet snow, not dry snow," she recalls. "But the roof made not one sound. This building is as solid as it can be. It's going to be here for the next millennium."

**7:12 p.m.** Students buzz around the campus, preparing for a group of 80 visitors on a yoga retreat and for their own trip to Los Angeles for a seven-day *zazen*, an intensive session of

chanting and meditation. A thunderclap abruptly echoes through Jemez Springs, and a few drops of rain fall. Framed by puffy dark clouds just beyond the mountain ridge is a perfectly arched, brilliant double rainbow. A few students, wearing street clothes since mid-morning, gather in the courtyard to admire the view over the foundation hall roof. Sunset won't come for another hour or so, but the shadows are already long in the canyon. And the luminance of the foundation hall is inverting itself: rather than admitting light, it now reads as a glowing object—a lantern, perhaps.

**9:00 p.m.** The water in the hot springs feels about 90 degrees or so, perfect for a soak under the stars. A faint glow emanates from the foundation hall. It's unclear whether it's a celestial light or something burning within. The campus is quiet and, yes, monastic. Its purity of purpose seems even more evident under the cover of night.



#### Center of Gravity Foundation Hall, Jemez Springs, New Mexico

client: Bodhi Manda Zen Center architect: Predock Frane Architects, Los Angeles—John Frane, Hadrian Predock (principals); Devendra Contractor (consultant) engineers: Sonalyst (structural); Norman Estanislad (M/E/P) consultant: Gary Wee (rammed earth) general contractor: Kenderdine Construction area: 2,500 square feet cost: \$500,000

#### **Specifications**

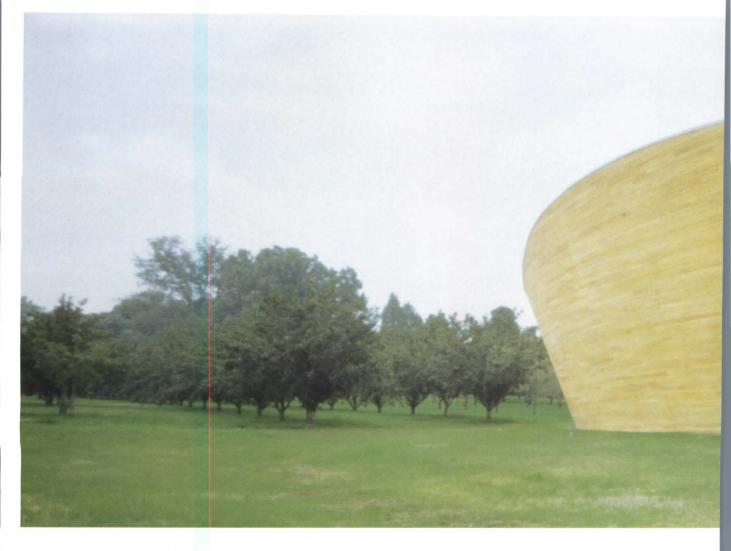
**structure:** glue-laminated beams, laminated-strand lumber, rammed earth **exterior:** double-layer opal polycarbonate **roof:** galvanized steel **clerestory:** tempered glass **Brazilian ipe hardwood flooring, decking, and doors:** Pau Lope **locksets:** Schlage **hinges:** Rixson **flooring:** tatami mats **rammed earth:** Gary Wee



# THE BOAT IN THE WOODS

Maya Lin's nondenominational chapel for a child-advocacy organization seeks meaning in the everyday.

BY ALAN G. BRAKE PHOTOGRAPHS BY TIMOTHY HURSLEY



**Farm gates can be misleading.** Sometimes they are simple marks of property lines, or a means of keeping the cows contained. Sometimes they are somewhat more slippery signifiers, a way of throwing a person off the scent of something extraordinary, a method of concealing as much as delineating. This could be said of the simple gate to Haley Farm—once the home of Alex Haley, author of *Roots* and ghostwriter of *The Autobiography of Malcolm X* and now a retreat and school owned by the Children's Defense Fund (CDF) in Clinton, Tennessee.

One of the country's most influential child-advocacy and civil-rights organizations, the CDF was founded by Marian Wright Edelman in 1973 with the mission to "Leave No Child Behind" (not to be confused with the Bush administration's No Child Left Behind Act of 2001). Site of the fund's Freedom School summer program for children from disadvantaged communities, Haley Farm also serves as a retreat and leadership-training center, and luminaries from both the literary world and the political left, such as Maya Angelou and Hillary Clinton, visit with some regularity.

#### A MODEST PROPOSITION

Located at the end of an unmarked gravel lane 30 miles outside Knoxville, Tennessee, through a keypad-locked gate, a narrow allée greets visitors; an apple orchard is visible on the left. At the end of the orchard sits Riggio-Lynch Chapel, a 3,400-square-foot, boat-shaped building designed by Maya Lin, which was dedicated at the end of July. Across a small pond from the chapel and also designed by Lin sits the Langston Hughes Library (July 2000, page 104), which incorporated an old barn on the property. The nondenominational chapel, named after Leonard Riggio, chairman of Barnes & Noble, and William Lynch, a former deputy mayor of New York City, is only her third freestanding building.

The chapel's exterior is clad in locally grown rift-sawn cypress and has no windows. A required fire exit opens onto two rows of trees, creating a view corridor into the orchard. Otherwise the building envelope is unbroken except for a 12-foot-high, eight-paneled retractable wall at the back of the chapel to accommodate spillover crowds seated in an open-air pavilion, which is rendered in wood, steel, and polycarbonate panels. Inside, the windowless building is entirely daylit by skylights, principally by a large oculus over the pulpit.



This 11-foot opening draws the eye toward the front of the room in the otherwise unadorned interior. Reflecting the exterior treatment, and in keeping with the building's boat-shaped form, interior walls are clad in horizontal slats of a wood-based composite material that contains no formaldehyde and doesn't off-gas. The floor is an elegantly polished concrete that contains a high level of fly ash, a waste product from coal-fired power plants that can serve as a cement substitute. Simple task chairs are arranged in orderly rows in place of pews. (Lin looked at Christian sanctuaries as well as Quaker meeting houses for inspiration, so the chairs can also be arranged in the nonhierarchical square of the Quaker tradition should such an arrangement better suit the purpose of a particular gathering.)

Outside, a modest but very beautiful

concrete-block building—housing restrooms, a kitchen, the pastor's office, and a small meeting room—is linked to the chapel by the pavilion. Lin, who worked on the project with Bialosky + Partners of New York City, used inexpensive structural and finish materials that are skillfully detailed, giving them both refinement and warmth.

#### MINING THE ORDINARY

As Henri Lefebvre asks in his 1986 essay "The Everyday and Everydayness," "Are not the surreal, the extraordinary, the surprising, even the magical, also part of the real? Why wouldn't the concept of everydayness reveal the extraordinary in the ordinary?" Lin seems be asking these questions by placing her rough-hewn ark alongside the simple secular block building, between the lilting orchard and the pond. Both buildings are plainspoken in their programs and tectonics, though the chapel itself nods toward a monumental form. Still, Lin's design has a quality of quiet grace rather than of grand pronouncement. As its wood cladding weathers, a factor Lin has considered carefully, the chapel will turn from golden to gray and more closely resemble the simple barn and cabin structures that dot the campus.

Haley Farm is a place where ordinary people and civic leaders go to envision—and plan for—a more just and humane society. Maya Lin has designed a place for visitors to find that vision within themselves.

Former Architecture staff editor Alan G. Brake is a design writer and critic based in Louisville, Kentucky.



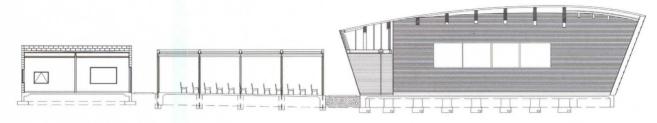


The cypress-clad chapel sits between an apple orchard and a pond on the 157-acre Haley Farm. Together, the chapel interior's raked walls, which are covered with horizontal slats of a wood-based composite material, and its exposed fir roof deck and beams recall a boat or ark (left)-a reflection, according to Maya Lin, of her client's mission to advocate a "safe harbor" for children.

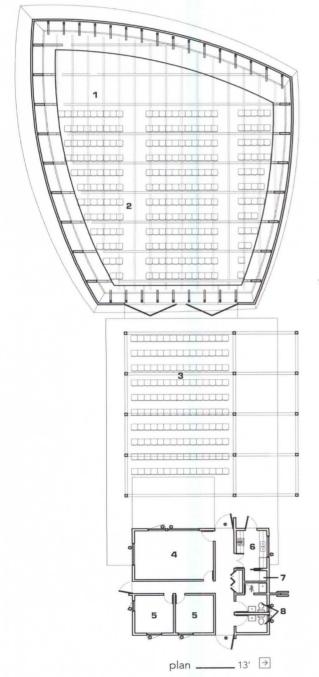


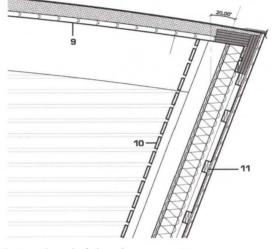
A 1,600-square-foot pavilion (above and right) links the chapel to a 1,100square-foot concrete-block structure that houses meeting rooms and other facilities (previous pages); the pavilion more than doubles seating capacity when the chapel's wall of folding panels is opened. Polycarbonate roofing and retractable canvas panels protect the open-air courtyard from the strong sun and inclement weather.





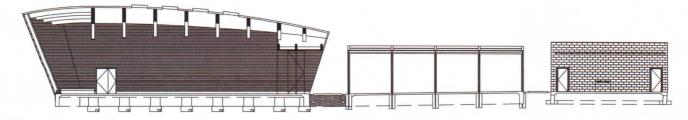
east-west section through office and pavilion \_\_\_\_\_ 15'



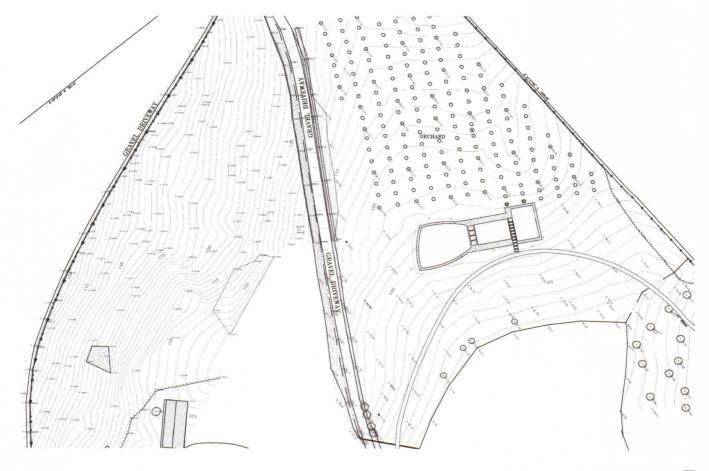


wall detail at south end of chapel \_\_\_\_\_ 1'

- 1 altar
- 2 chapel seating
- 3 pavilion seating
- 4 meeting room
- 5 office
- 6 kitchen
- 7 pantry
- 8 restroom
- 9 fir roof deck
- 10 wood composite slats
- 11 cypress cladding on insulation



east-west section through chapel and pavilion \_\_\_\_\_ 15'



site plan \_\_\_\_\_ 50′ 🕥

## Riggio-Lynch Chapel, Clinton, Tennessee

**client:** Children's Defense Fund **designer:** Maya Lin Studio **architect of record:** Bialosky + Partners, Architects & Planners, New York City **engineers:** Robert Silman Associates (structural); Barge Waggoner Sumner & Cannon (civil); Lazlo Bodak Engineer (mechanical); Acoustic Dimensions (acoustic) **consultants:** Tillet Lighting Design (lighting); Edwina von Gal (landscape design) **development manager:** Barnes & Noble **contractor:** Whiting-Turner **area:** 6,100 square feet **cost:** withheld

AN ITALIAN VILLA INFORMS THE DESIGN OF A VIRGINIA MAUSOLEUM. BY VERNON MAYS PHOTOGRAPHS BY JAMES WEST

PAYING

## 60 10 2004 Film

# RESPECTS



The rigid geometry of the mausoleum crypts is countered by their curving rooflines (above), which are planted with sod to suggest a continuous ground plane.

In a small Virginia town not known for its architectural accomplishments, a striking new mausoleum and columbarium have risen from the ground and, with them, have brought high artistic aspirations. Built as an expansion of Sherwood Memorial Park, a 110-acre cemetery in the Blue Ridge Mountains hamlet of Salem, Belvedere Gardens provides nearly 3,000 final resting places in a setting that strives not only to respect the departed, but to create a meaningful respite for family and friends.

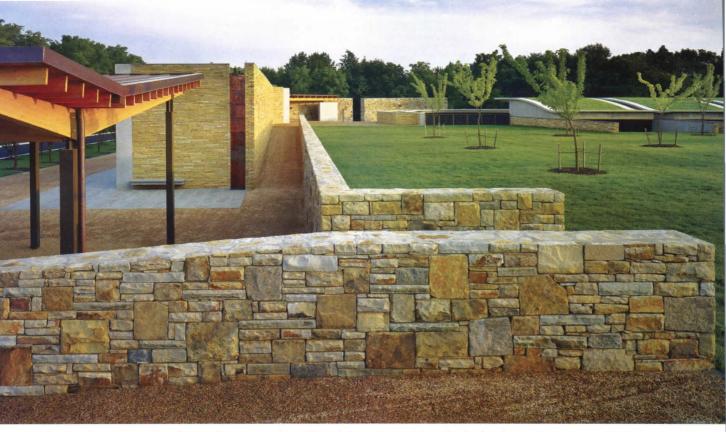
"It occurred to us that we were, in fact, not designing for the deceased but for the living," says Christopher Fultz, a principal of SMBW Architects, the Richmond-based firm that designed the project. "We felt we had to build something substantial, meaningful, and beautiful."

## **INSCRIBING THE LAND**

Founded in 1928, the cemetery had built classically inspired mausoleum facilities in the 1930s and 1950s. Steady demand in recent years required additional crypts and niches for remains. Sherwood Memorial Park's owner selected a hilltop site with sweeping mountain vistas for the latest expansion. SMBW explored several precedents to inform their scheme, including the pastoral Woodland Cemetery in Stockholm designed by Erik Gunnar Asplund and Sigurd Lewerentz in 1920. But the design team selected as their chief inspiration the Italian garden at Villa Giulia (1555), a Renaissance composition in Rome that harmoniously blends building and landscape.

"The devices employed there by Vignola established our model for a reciprocal relationship between the natural and artificial landscape," notes Fultz. Of primary interest to the Belvedere Gardens' designers was the creation of sturdy walls that would function as both spatial boundaries and framing devices for scenic views. In addition, the Italian villa suggested a way to reveal the ground plane so that occupants would comprehend the depth of its grotto—a device used with success in the mausoleum's large sunken room.

The result is a composition of discrete spaces woven into the landscape, each one intended to enhance a visitor's perception of earth, sky, water, and sound—metaphors for mortality, rebirth, transcendence, and hope, respectively. SMBW started by carving away the earth, a fundamental gesture that placed the largest of the mausoleum's contemplative spaces well below grade. The entire project is organized around this central outdoor room, known as the Cloister, a sunken courtyard paved in strips of bluestone. A sweeping crypt wall to the south and five boxlike volumes to the north establish the edges for this space, with an opening to the



At the northeast corner of the site, a wood pavilion (above) provides shade for funeral services. Fieldstone walls define circulation paths and add a sense of weight to the overall composition.

west that reveals the rounded mountain ridges.

From the Cloister, visitors ascend one of four narrow passageways between the large mausoleums—each capped with a sinuous sod roof—and emerge on a grass platform that suddenly opens wide to the sky and panoramic views. This grass-topped plinth, dubbed the Grove because it is planted with a grid of 36 orange trees, provides additional space for caskets interred in underground vaults. Backing up against each of the boxlike mausoleums is a sunken "family estate," the most private and intimately scaled spaces for crypts.

Visitors arriving for the first time often begin their encounter in the third main space, the Lane, a formal garden defined by an allée of maple trees planted parallel to a monumental crypt wall. At the end of the Lane is a simple wooden pavilion where mourners gather for funeral services.

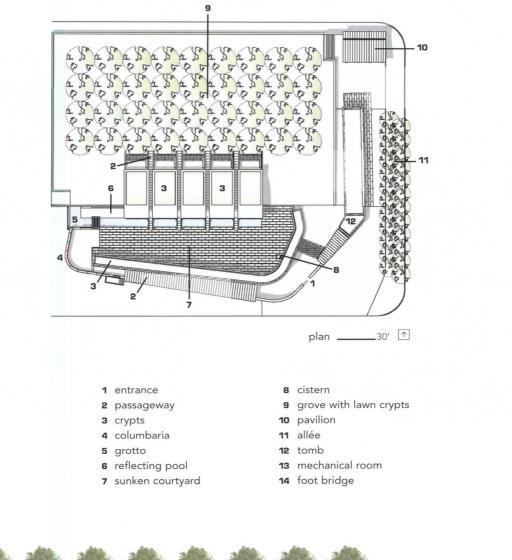
## CONTEMPLATIVE SPACES

From the moment one approaches the complex, its poetic language starts to emerge. Perimeter walls made of regional fieldstone lend an air of monumentality and permanence to the site. A high level of craftsmanship connotes dignity and refinement. The play of shadow and light, the moments that celebrate water, and the bronze detailing that complement the smooth concrete and polished stone surfaces reflect the spirited nature of the design.

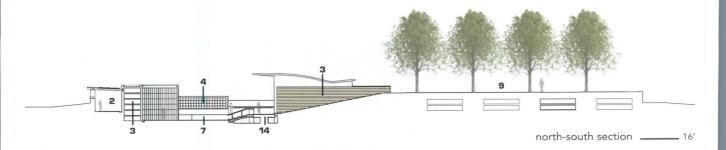
Yet that very spiritedness is, at the same time, the greatest shortcoming of the project, because it threatens to overpower visitors' experiences. Because the mausoleum's architectural forms all strive for equal importance, an overarching sense of hierarchy is lost. Likewise, the arrangement of programmatic elements—and the places they create—in a composition derived from the designer's intuitive sense of visual balance has yielded an ambiguous circulation pattern. Indeed, on the day I entered the main portal, I was more inclined to climb the broad stair toward the mountain view than I was drawn into the shadowy tunnel that leads to the Cloister. For those who return repeatedly, the randomness of circulation may be inconsequential. For the first-time visitor, the mixed messages are a bit disorienting.

Overall, however, Belvedere Gardens is an impressive achievement for both the clients and the emerging architecture firm that created it. High-minded, well built, and peaceful, this resting place is appropriately dignified and provides comfort, contemplation, and meaningful context to the living.

Contributing editor Vernon Mays is curator at the Virginia Center for Architecture in Richmond.









A covered passageway leads visitors from the entrance to the columbarium and a sunken courtyard.

## Belvedere Gardens Mausoleum, Salem, Virginia

**client:** Sherwood Memorial Park **architect:** SMBW Architects, Richmond, Virginia—Chris Fultz (principal in charge); Fred Ortiz (principal); Ron Wolfe (project manager); Marco Marraccini (project architect) **engineers:** Fox & Associates (structural); T.P. Parker & Son (civil) **consultants:** Commonwealth Lighting (lighting); Atlantic Fountains (water feature); Van Yahres & Associates (planting specification) **general contractor:** Sherwood Memorial Park **area:** 2.4 acres **cost:** withheld

## Specifications

structural steel: Fabricated Metals Industries precast concrete: Miscellaneous Concrete Products stone: Scott Stone (veneers); Doug Norman (stone subcontractor); Stone Center (bluestone paving); Jim Skiles (masonry, stone subcontractor) granite: Architectural Stone Imports aggregate paving: Brett Aggregates (stone dust); Luck Stone (pea gravel) bronze: Charles Yeager, Chris McBrayer (bridges, doors, specialty items); Custom Ornamental Metals (guardrails, shutter trim) cast glass: Blenko Glass plantings: Feazell's Custom Lawncare & Landscaping sod roof: American Hydrotech waterproofing: Preservation & Protection Systems crypt hardware: Eickoff Columbaria





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## TOTAL DESIGN, DOWN TO THE SOAPDISH AND THE SOAP

Richardson Sadeki | Bathhouse Spa | Las Vegas

## by C.C. Sullivan

A long time ago, when people still smoked indoors, architects talked of "designing everything, down to the ashtrays," a euphemism for total control of the built environment. We smoke less today, but we're even more fixated on fully integrated design. In theme parks and retail, a marriage of merchandising and architecture infuses everything from décor to product packaging. Think Starbucks or the new Apple stores: places with a corporate "personality" where the signage matches the seat fabric. The totalizing "identi-kit" has also migrated into the travel and hospitality sectors, where the likes of JetBlue and W Hotels translate their work with advertising and branding agencies into interior designs and entire buildings.

A few architects challenge this paradigm, however, arguing that architecture—not advertising—should lead the charge. Ad agency **creative processes** are outdated and their fees are inflated, they say, and "the tradition of investigating and maintaining a concept and its relationships is strongest within the architectural pedagogy," contends Heidar Sadeki, a principal of New York City's Richardson Sadeki. "Also, the way architecture is being used is more and more iconic, so we see more simi-

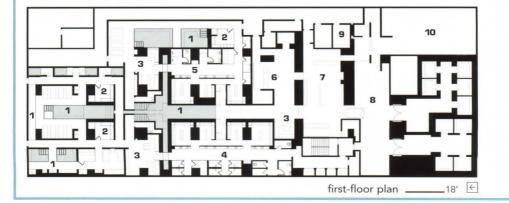


## The logo, seen in the lobby, riffs on the spa's bisected layout (top). Exuberant benches contrast with ultrasuede walls in lounge areas (above).

larities between architecture and **pack-age design**, because it creates a very strong identity," he adds.

It's a powerful idea: If your business is about *place*, why initiate your concept with a mere **logo** or slogan? A growing number of clients apparently agree. For Sadeki and his partner, Clarissa Richardson, spas and salons are ideal patrons; these businesses seek potent ways to differentiate themselves that can be rendered in a

- 1 pools/water
  - 2 sauna/steam room
  - 3 lounge
  - 4 women's lockers
  - 5 men's lockers
  - 6 reception
  - 7 retail
  - 8 lobby
  - 9 office
  - **10** gym



refined palette. "A program like a spa lends itself to an overall immersive experience along different visual trajectories," says Richardson. "And our spa clients have strong ideas about the **customer experience** and **operational needs**. The circulation has to be well-planned, as do service stations and equipment in treatment rooms."

For a recent commission at the Mandalay Bay Resort in Las Vegas, the designers created Bathhouse Spa, a series of minimalist, black-slate-clad spaces that are clearly indebted to Peter Zumthor's Thermal Baths at Vals (1996). But, while Zumthor created a "Bilbao effect" in Switzerland before Bilbao even happened, Richardson Sadeki creates an urban version of a destination spa and extends their architectural brand into **graphics**, **grooming products**, and even staff **uniforms**.

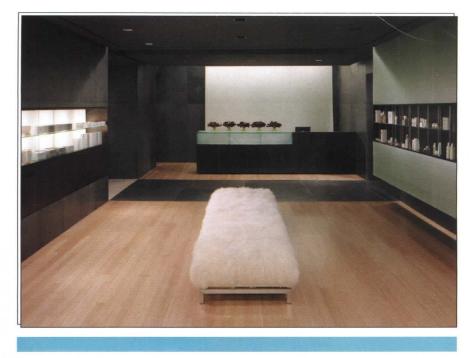
"We were very lucky with this client," Sadeki recalls. "After only one presentation, we had complete control. Our only constraint was time."

## WITH TOTAL DESIGNS, BETTER TOTAL BILLINGS

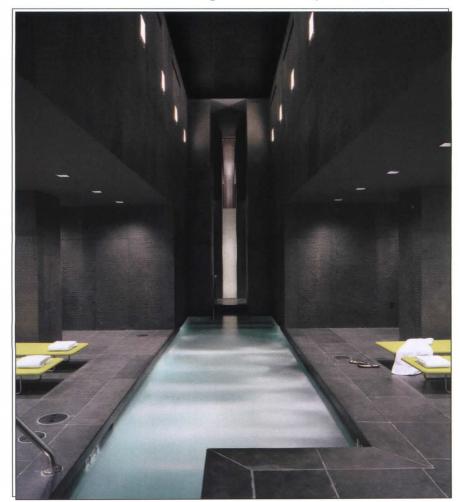
While creative control is the allure of design projects encompassing identity, graphic, and product tasks in addition to architecture, a less noticeable advantage is their better fees. In fact, some multidisciplinary studios say they subsidize architectural work with other billings. Plus, the practices incur less overall liability per billable hour.

While architect compensation is typically based on a percentage of construction costs, advertising agencies and graphic designers increasingly work for flat fees, so that much of the nonarchitectural design work is paid in lump sums. But while building designs often suffer profit-killing downstream changes, other disciplines are less susceptible to such major revisions. Also, designers may negotiate royalties from the sales of consumer products they help create.

Another secret: The perceived value of a logo—which travels easily—may be inordinately high as compared to that for a building.



Architecture and merchandise unite in the spa store (above). The architects also designed house grooming products and staff uniforms (facing page). Textured slate walls and cascading water mark the pool areas (below).







## THE INTEGRATED ASSEMBLY LINE

To create Bathhouse Spa, the design firm Richardson Sadeki employed a process honed with other spa and salon clients. Before schematic design, the client completed a five-page questionnaire on everything from programmatic needs to phrases that encapsulate the spa's mission. Similar to a branding or identity exercise, the designers then compiled images for idea boards. Design development mirrored that for a typical architectural project, but the production phase required coordination with numerous specialized suppliers and consultants.

**Branding and graphics**. The firm created the identity of the Bathhouse Spa, as well as its logo, which echoes the facility's bisected floor plan. In the production phase, the architects selected paper stock and printing techniques for service "menus," appointment cards, and shopping bags. **Products**. Richardson Sadeki developed three "house lines" of grooming products, their brand names—Infuse, Immerse, and Submerge—inspired by the amount of time a guest's body would be in contact with the spa's water. Working with chemists (to achieve desired colors and scents) and package manufacturers (to produce container formats and print secondary packaging) the firm navigated a concept-to-product timeline that took about one year.

**Uniforms**. The architects worked with a consultant—in this case, Iceland's minimalist fashion designer, Steinunn Sigurd—to produce outfits for 11 unique employee types, from aestheticians to manicurists. The firm selected fabrics and approved samples for the works.

Of course, Richardson Sadeki specified building materials and detailed the construction, and they designed most of the furniture, too—focusing closely on fabrication methods, such as creating the texture of the slate walls.

## Bathhouse Spa, Las Vegas

client: Mandalay Bay Resort architect, interior designer, and designer of furniture, graphics, packaging, and uniforms: Richardson Sadeki, New York City—Clarissa Richardson, Heidar Sadeki (creative directors); Guillermo Garita, Alex Grossman, Vanessa Ah-Chuen, Damian Webster, Luis Diego Quiros, Natalie Cheng, Mauricio Carey (project team) architect of record: Klai Juba Architects, Las Vegas—Dan Juba (principal) consultants: Lochsa Engineering (engineering); Patdo Lighting Studio (lighting); CP Strategy (merchandise) general contractor: Mandalay Bay Development area: 15,000 square feet cost: witheld



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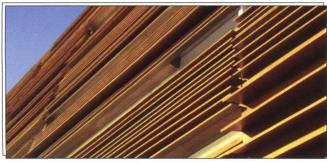
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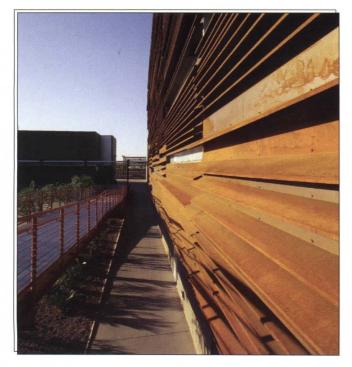
# **OPEN AND SHUT**

Horizontal metal fins modulate natural light for a college performing-arts center by Jones Studio.

by Abby Bussel



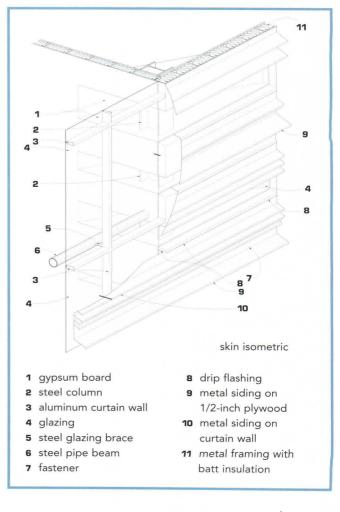




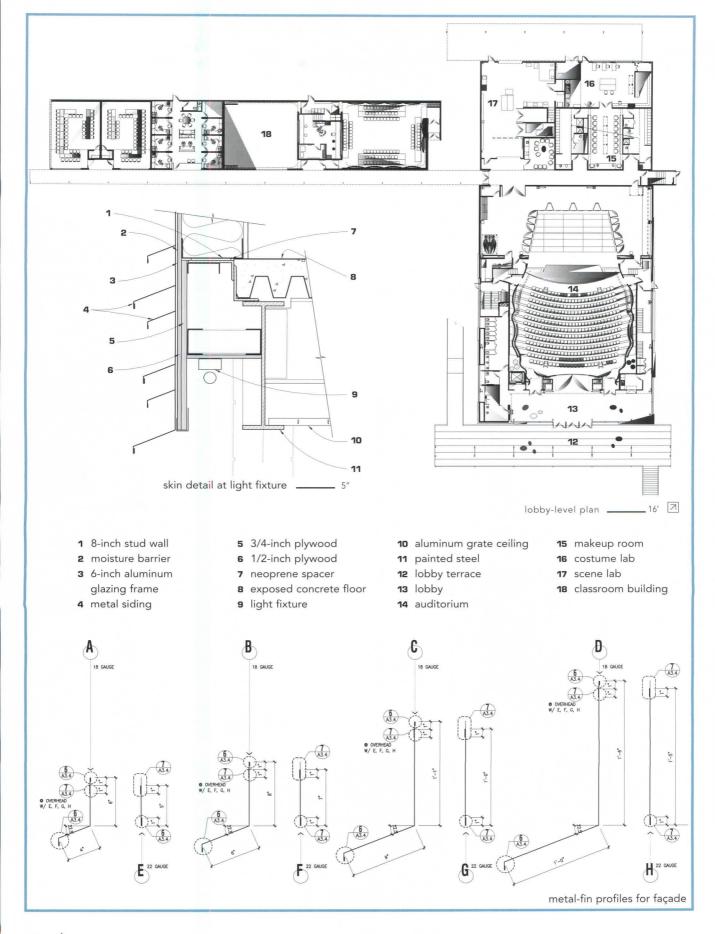
South Mountain Community College in Phoenix, Arizona, is a 20-year-old campus of orthogonal buildings organized around square courtyards. When Jones Studio was invited to design a performing-arts center for the school, they wanted to adhere to the college's original pattern of development without mimicking the existing desert-colored, **stucco-clad** academic facilities. "We knew our building would sit in a lone landscape," explains Marie Salenger, the firm's project manager, referring to the empty field that was earmarked for the new hall, so the design team decided to produce "an abstract box that might somehow change over the course of the day."

The architects divided the box into three programmatic components—performance hall, backstage facilities, and classrooms. The last are housed in a low-rise, concrete-block bar building connected to the hall by a **covered trellis**, in keeping with the campus circulation system. For the performance hall and associated spaces, Jones Studio developed a system of **metal fins** that "peel away at the public end" of the building, notes Salenger. The enclosure's transformation from opaque to semitranslucent signals the internal organization of building functions.

The challenge was in how to make the horizontal metal members appear to be randomly placed while producing a system that could be easily and economically built by the contractor. The solution was a **palette of four profiles**, which



**10** 2004 **71** 







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For more information, call (203) 934-6363 or log on to <u>www.bilco.com</u> © 2004 The Bilco Company. The southwestern sun is both welcomed and kept at bay by a skin of horizontal metal fins. The fins create an opaque box around the performance hall, but are paired with translucent glazing in the lobby (left).

are screwed into the plywood shell and moisture barrier, and four horizontal course dimensions. Salenger likens the **overlapping horizontal fins**, which range in depth from 4 to 12 inches, to flashing that is pulled all the way down the walls of the building.

Community college officials wanted their new performance-and-classroom facility to be both functional and symbolic. With a lobby that glows at night and an envelope that shades itself by day, the client got what it asked for: a beacon for its expanding campus.

## South Mountain Community College Performing Arts Center, Phoenix, Arizona

client: Maricopa Community College District architect: Jones Studio, Phoenix—Eddie Jones, Neal Jones, Brian Farling, Marie Salenger, Matthew Salenger (project team) engineers: Rudow & Berry (structural); Associated Engineering, Kunka Engineering (M/E/P); Evans Kuhn & Associates (civil) consultants: Landry & Bogan (theatrical); McKay Conant Brook (acoustical); e group (landscape architecture) general contractor: Layton Construction area: 33,775 square feet cost: \$7 million

## Photographs by Mark Boisclair

## Specifications

concrete: Layton Construction masonry: Superlite Block, MAG Construction structural steel: Hoffman Steel metal/glass curtain wall: Border Glass, Arcadia Glass metal siding: Kovach roofing: Pioneer Roofing, Derbigum skylights: CPI doors: Arcadia, Curries, Kelley Brothers, Overly Door, Ralf Wilkins hardware: Sargent hinges: Hager ceiling systems: Carnegie, Xorel ceiling panels: FabriTRAK System custom woodwork and eucalyptus-veneer wall panels: Stradlings paints and stains: Dunn-Edwards carpet: Mohawk furnishings: Knoll, Neinkamper, Wenger, Norcon downlights: uplights: Elliptipar Lithonia exterior lighting: Hydrel elevators: Otis

# **DEEP MEMORY**

Anecdotal evidence points to the pros and cons of data-storage systems.

## by Katie Gerfen

Data-storage systems change as quickly, if not more so, than the computer industry itself. File sizes are increasing and storage options must accommodate them. These days, floppy disks are better used as coasters than viable media. The question in today's world is, are CDs the next to go?

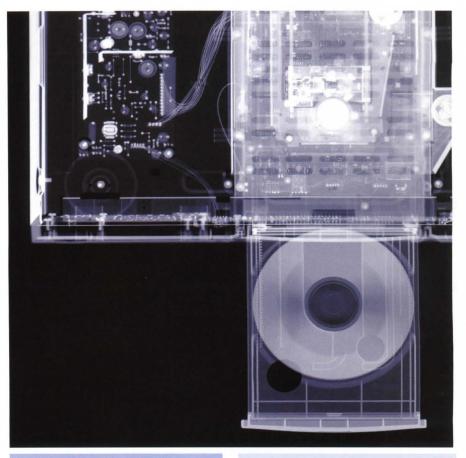
The question is an important one for architects, as backing up CAD or .dwg files can be a memory-consuming process. DVD storage is on the rise, with higher capacities than CDs (nearly 400 percent greater) and increased compatibility across platforms; with such benefits, even small firms are making the change. Jeff Peterson, principal of the four-employee, Cambridge, Massachusetts-based Peterson Architects, says that "the ability to store a lot more on a single disk" is the main driver for considering the transition. "You can certainly fit a CAD drawing on a CD," Peterson says, "but not a whole project."

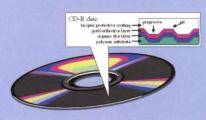
But despite the increase in DVD use, Andy Marken, spokesperson for Verbatim (www.verbatim.com), a manufacturer of storage media, is not so sure that CDs are moving toward obsolescence. "CDs are not going to go away for 10 to 20 years. The technology costs almost nothing, plays almost everywhere, and one 700-megabyte CD will hold approximately four four-drawer filing cabinets worth of data. The technology really is universal."

## PLATFORM NEUTRAL

Since most new burners accommodate both formats, each type of media can be used when it is most appropriate. "Unless you're putting on 20 to 30 files, you don't need to use a DVD," says Marken. But "now users have that choice."

The fact remains, however, that DVD





usage is on the rise. Recent advances have made the technology much more affordable, so it's increasingly feasible for sole proprietors to buy the burners and disks. With CDs running between 20 and 40 cents per disk, DVDs have now come down to \$1.00 to \$1.50 per unit. Players and burners themselves have also gotten cheaper, and in fact have started to come standard with many of the newer computers on the market. Now, simply upgrading one's computer might be enough to force the transition from CD to DVD storage.

Increased compatibility with all players is also making DVDs more attractive. When the technology first became The CD-R disk, or single-write CD, is one of the options on the market for removable data-storage. This medium is finding competition with the rise of DVD burners and other technologies.

available, some formats could not be read on all machines, an important factor to consider when sending a set of drawings or a video presentation to a printer or client. Now, however, says Marken, "**writable DVDs** can be read by virtually every player made available within the last two to three years." Rewritable DVDs are still not compatible with all machines, but should be soon. (If this is a concern, testing a written disk on a new player before buying is always an option.)

## MORE MEDIA OPTIONS

The question of data storage certainly does not stop with the choice of DVD or

CD. Each type of media has several suboptions, including read-only, rewritable, and single or double layered. And while that only scratches the surface of the options available, the only one that concerns most users is the rewritable-ornot option. While regular read-only CDs allow the user to burn information once and make no further changes to the files, rewritable CDs allow the user to reburn the same physical CD, adding or writing over information as desired. "The rewritable feature doesn't really appeal," says Peterson. "CDs are cheap enough that it doesn't really matter and while we've had no trouble with writable CDs, we've had the rewritable be less dependable in the past." Marken agrees about the price point of CDs, but maintains that there is no deterioration of quality from writing to writing. "You can have 1,000 overwrites before it goes bad," he says. "It's a nonissue."

## **DEEP STORAGE OPTIONS**

Ken Sanders, chief information officer at Gensler, a 1,700-employee firm with 25 offices around the world, says that removable storage devices are merely the tip of the iceberg for storage at a large architecture firm. "Our official firm back-up is on tapes or spun to disks," Sanders says. "Tools such as CDs and DVDs are more useful for adhoc backups such as marketing presentations." He also comments that new technology and increased bandwidth across their network have made it possible to work from a more centralized database. which, for a firm of Gensler's size, is easier than sending disks back and forth between various branch offices.

All options considered, DVDs and CDs will likely coexist in the media-storage world for quite some time: Different capacities lend themselves to various uses. So when eyeing that water ring on your coffee table, don't reach for that spare CD quite yet—it will still prove useful in the decade to come.

Marken adds that nothing is worse than seeing someone driven nearly to tears after suffering a mistakenly hit delete key or a crashed hard drive near an important deadline. Regardless of the storage medium, he says, "Incremental and work-in-progress backup should be a standard part of every architect's practice."



In response to focus groups and user reviews, ArchiCAD 9.0 was released last month. This new version features a customizable workspace; an enhanced way of organizing and creating collections of plans in PlotMaker, including an automatic numbering system; compatibility with iDrop, which allows users to drag and drop manufacturer's .dwg files into the program as well as import images of products to be rendered into its virtual modeling system. Also new is the integration of the LightWorks rendering engine, which is known for createing soft shadows, transparency, and reflective surfaces in renderings. The new version is said to be 20 percent faster than ArchiCAD's version 7.0, and twice as fast as its version 8.0, making the revamped ArchiCAD better across all platforms.

된 product: **Pushbutton Plus** 된 manufacturer: **Bluebeam Software** 된 web: **bluebeam.com** 

Designed to work in conjunction with AutoCAD and other CAD software, Pushbutton Plus allows architects to save drawings and documents into a variety of file types—such as PDF, JPEG, and TIFF—in groups, instead of the standard, time-consuming, one-file-at-a-time process. Files are



gathered into batches and converted, each file remaining separate and with no data in the native file being altered. The software also allows users to upload their drawings directly to the website of Kansas City, Kansas–based U.S. Reprographics Network, select printing options, and send printed drawings to clients via FedEx. Pushbutton Plus is available by the seat for individual or firm-wide use.

FOR INFORMATION ON CAD SOFTWARE, CIRCLE 130 ON PAGE 89.

sources

product: Grid workstation
manufacturer: Bretford

D web: bretford.com

The latest addition to the maker's Liquid Workspace line, Grid maximizes office density while providing an integrated approach that is a step above the cubicle. The system is a light-looking, rectilinear workstation series that can be easily configured with 90degree and 120-degree units, as well as elliptical and double ends, returns, and executive desks. Realized in conjunction with New Zealand's Formway, Grid workstations are freestanding and their glide-mounted C-legs are heightadjustable; the product integrates seamlessly with Liquid's unified workstations, power and data cabling, and privacy screens.



⇒ product: Teknion Wood
⇒ manufacturer: Teknion
⇒ web: teknion.com

The Wood series is billed as the first allwood casegoods ensemble to be certified by IAQ enforcer Greenguard. Teknion's Korato, Galatina, Modena, Volterra, Umbria, and Philadelphia lines have been recognized by the environment institute for their low-emitting finishes and particle-board alternative.



∋ product: X Series
∋ manufacturer: Haworth

∃ web: haworth.com

A new range of file and storage cases, the X Series is customizable with legs or glides, lateral files, bookshelves, wardrobes, valets, and combinations of these elements. For even more precision, specifiers can choose from five wood finishes, nine translucent finishes, three styles of pulls, three varieties of metallic perforation, nine trim colors, and three metallic trim colors. Most important though, a patent-pending box-in-box construction and a rack-and-pinion lock mechanism keep valuables safely tucked away.



product: Abak
manufacturer: Herman Miller
web: hermanmiller.com

After years of popularity in Europe and Asia, the freestanding Abak desking system is being introduced stateside. Filling roles from base table to full-function office system, Abak is delicately scaled and translucent in appearance and features a nonmodular spine-wall for easy and varied configuration.



된 product: NXT 된 manufacturer: Porro 된 web: porro.com

Called System in Europe, Porro's bookshelf, ladder, table, desk, and storage components can be custom built and configured for high-end residential, hospitality, or office settings. Available as a wall-braced unit or as a partition, NXT comes in a broad range of veneers, as well as matte and gloss finishes.



FOR INFORMATION ON FURNITURE SYSTEMS, CIRCLE 131 ON PAGE 89.

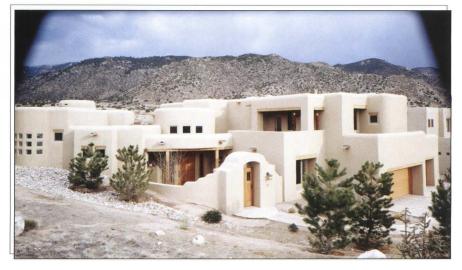
 Product: three-coat stucco
manufacturer: LaHabra Stucco, Merlex Stucco
web: lahabrastucco.com, merlex.com

stucco

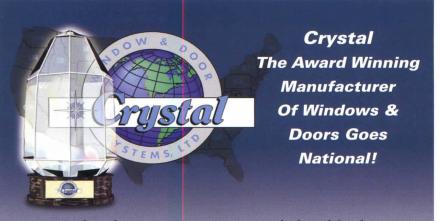
sources

Though most commonly found in warm climates, stucco, the common name for portland cement plaster, is widely employed across the United States—in historic districts on the East Coast as well as in new residential and commercial projects above and below the Mason-Dixon line. Available in one- and threecoat formulas, stucco is manufactured by a variety of companies in both stock and custom colors and textures, according to the Newport, California–based Stucco Manufacturer's Association (www.stuccomfgassoc.com).

**Three-coat stucco** is considered traditional stucco, consisting of lathing—with chicken wire or another textured material—a brown coat, a scratch coat, and a color coat. The total thickness is approximately 7/8 inches, with only 1/8 inch of



that being the final color layer. While in the past, the stucco has been textured with aggregate made from granite, limestone, and marble that was visible in the surface, that is all changing, according to Duane Huisken, director of marketing and product development for Anaheim, California–based LaHabra: "We're seeing a significant trend toward **smooth-sur**-



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face stucco in Tuscan and Italianate style projects." Smooth-surface stucco is a typical three-coat application with no visible aggregate or trowel marks. Three-coat stucco is characterized by resistance to moisture and breathability—if water gets in, it can soak out to the exterior through the entire surface of the application. Water-resistant building paper is typi-

cally used to isolate the plaster and the lath from water-sensitive sheathing or framing. According to Nick Brown, vice president of Orange, California-based Merlex Stucco, this feature makes the three-coat system more breathable than vinyl siding and many other exterior cladding systems.

**One-coat stucco** is primarily a product valued for its speed in application. A much thinner layer, the one-coat version is sealed with acrylics that resist water. However, the seal means there is no breathability as there is in the three-coat version; for water to get out, one-coat applications are detailed to drain to the base and seep out through a joint.

The trend toward smooth stucco has fostered a sleeker, more monolithic appearance and a reduced incidence of the textures and deep trowel markings that characterized stucco applications in the past. With the **color-coat** able to be applied over concrete masonry units, poured-concrete, and other base systems, stucco is more versatile than critics suggest.

FOR INFORMATION ON STUCCO AND E.I.F.S., CIRCLE 132 ON PAGE 89.

## egress/access

sources

product: Auto gate systems
manufacturer: Van Noorden
web: vannoorden.net

Made of hand-forged steel, Van Noorden's automated gate systems are custom-made to client specifications. Available with brass, hardwood, and composite components, the gates are powered by small electrohydraulic hinges capable of opening and closing a 1,200-pound leaf gate in 12 seconds, 60 times per hour. Mounted to swing either outward or inward, the units are rated to a 3-million-cycle lifespan.



⇒ product: LadderUp safety post
⇒ manufacturer: Bilco
⇒ web: bilco.com

With adjustable hardware that can accommodate almost any rung size or ladder spacing, the LadderUp post allows safer access to scuttles mounted in roofs; doors in sidewalks, vaults, or floors; and manholes. The telescoping unit is spring-loaded for easy operation; the post locks in the fully raised position and is easily released with a hand lever to be retracted when not in use.



크 product: **85-inch SL27 HD hinge** 크 manufacturer: **Select Products** 크 web: **select-hinges.com** 

Recently approved for use by the U.S. Department of State for high-security applications, the SL27 continuous geared hinge is rated to 60 minutes for both forced entry and ballistic resistance based on the agency's standard, SD-STD-01.01. A top-to-bottom frame-to-door fitting with more than 50 fasteners, the hinge is now standard issue for all American embassies.



된 product: Eclipse Series 된 manufacturer: Crescent/Stonco

∃ web: stoncolighting.com

This light-emitting-diode (LED) Eclipse system of exit and emergency lighting features lower architectural profiles and fully adjustable lamp heads. Available in black or white housings and matching canopies of impact-resistant and UV-stable thermoplastic with a UL94-5VA flame rating, the products comply with NFPA Life Safety Code 70 and 101 and with OSHA rules. Other features include flexible mounting options and snap-together design. The signs' stencil faces come with 6-inch lettering in red



or green. Eclipse was designed with increased visibility and low operating maintenance in mind. Three units are available: the CPC exit-and-emergeny sign, the CP exit sign, and the CEL emergency light with no signage.

FOR INFORMATION ON ACCESS AND EGRESS, CIRCLE 133 ON PAGE 89.

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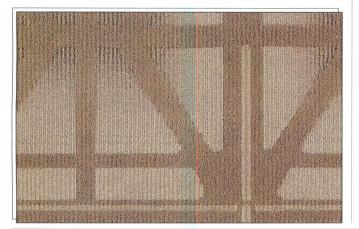
www.emma-assoc.org or call NAAMM 312-332-0405



Circle 6 or www.architecturemag.com/productinfo

product: The Chicago Collection
manufacturer: Masland Contract
web: maslandcontract.com

Two principals of Perkins & Will, Eva Maddox and Eileen Jones, have collaborated on The Chicago Collection, a commercial carpet line derived from the Windy City's architectural history. Seven styles are available—Topo, Windows, Fragments, Blocks, Docks, Cityscape, and Bridges (below)—in 10 colorways. Some patterns feature selective shearing to emphasize depth and texture.



product: Aspect and Perspective
manufacturer: PacifiCrest
web: pacificrest.com

With complementary, large-scale patterns (and a 12-inch-square repeat) that can be installed together or independently, Aspect and Perspective carpets are available in bold and neutral colors for offices, retail, hospitality, and institutional applications. Aspect is precision-tufted with multiheight loops for visual depth; Perspective is tipsheared for a softer appearance. Both are constructed of piece-dyed nylon yarn.

product: Initiative
manufacturer: Mohawk Commercial
web: mohawkgroup.com

A broadloom and tile series from Mohawk Commercial, Initiative uses extra-long strands of yarn to produce random coloration. The broadloom repeat, for exam-



ple, is 80 inches, and it can be combined in a single floor with the tiles. The manufacturer's UltraSet Modular System backing offers a hard-tile underlayer designed to eliminate cupping, doming, and dishing.

된 product: **Fragments** 된 manufacturer: **Shaw** 된 web: **shawcontract.com** 

Commercial carpeting from Shaw now includes the Fragments collection of broadloom and modular products, designed in collaboration with the Lauckgroup, an interior architecture firm with offices in Dallas and Austin. All styles in the line are based on a single design element that is manipulated to create varied patterns. Tailored to corporate interiors, Fragments employs a skein-dyed, high-luster recyclable nylon.



product: MotorSport Collection
manufacturer: Lees Carpets
web: leescarpets.com

A partnership between Lees Carpets and BMW Group DesignworksUSA has produced the MotorSport Collection. Available in both stainand fade-resistant broadloom and tile, the offering includes Photofinish, which is inspired by the bluish trail of a racecar's taillights; Airflow, which is derived from a car's air-intake grill; and Finishline, which recalls the spray of champagne following a race. Both tile and broadloom versions come in multiple colors.



FOR INFORMATION ON CARPET, CIRCLE 134 ON PAGE 89.



## views

## EXHIBITION

Photography | Williams College Museum of Art, Williamstown, Massachusetts | Through December 19 Few photographers in any field have the opportunity or, more significantly, the vision to play a role in defining an era. Architectural photographer Ezra Stoller is, of course, among the exceptional ones. Six images of projects captured by Stoller between 1958 and 1977 are on view in a single room of the Williams College Museum of Art. While modest in size, the show wraps visitors in the larger-than-life world of midcentury modern America. Masterworks by the guiding lights of the time-Louis I. Kahn's Salk Institute, Frank Lloyd Wright's Fallingwater and Guggenheim, Ludwig Mies van der Rohe's Seagram Building, Eero Saarinen's TWA Terminal (right), and Paul Rudolph's Yale Art & Architecture Building-are seen in their black-and-white essence through Stoller's large-format lens. While many of the images taken by the 1961 AIA Gold Medal-winning, architecturally trained photographer have been widely published, there is something indescribably special about standing in the same room with them. Abby Bussel

Ezra Stoller Architectural



воок

## Style | Gottfried Semper |

Getty Subtitled "Style in the Technical and Tectonic Arts; or, Practical Aesthetics," this translation from the German by Harry Francis Mallgrave and Michael Robinson brings anew Gottfried Semper's ambitious and hefty treatise to the English reader. Though known for monumental buildings in Zurich, Dresden, and Vienna, the nineteenth-century practitioner and author focused more tightly here, concentrating on the stylistic underpinnings of such fields as ceramics and textiles rather than on large-scale building elements. Though seemingly dated-the work was penned between 1860 and 1863 and is thus free of modernist, postmodernist, and even "blob-itectural" references-the 992page tome remains notable for its enduring impact on the study of aesthetics and art history. The Getty Research Institute edition maintains the separate section of color plates, enjoyable for its archaic but crisp presentation form. Jamie Reynolds

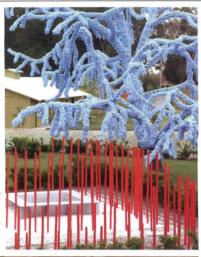




Holzbekleidungen aus Terrakotta (Sicilien.)



Cornerstone Festival of Gardens | Sonoma, California Visitors to the INSTALLATION rolling hills and sprawling vineyards of Sonoma County in Northern California can now find an unnatural wonder: a towering azure tree-more precisely, a giant Monterey pine covered in 70,000 sky-blue Christmas balls, the centerpiece of one of the 15 gardens currently making up the Cornerstone Festival of Gardens. While some are permanent, others will be redesigned over time. Blue Tree (right) is the creation of Montreal-based landscape architect Claude Cormier and marks only one of a series of striking installations throughout the site. The premise of the property, as dreamed up by its founder, former toy developer Chris Hougie, is to have a series of public spaces—each designed by a different landscape architect or garden designer-where visitors can walk through installations that evidence the connection between architecture, art, and nature. Gardens range from the whimsical—Martha Schwartz's Usual Suspects has nine miniaturegolf links-to the socially relevant, such as landscape architect Tom Leader's Break Out (below), with screen doors and ambient noise that comments on the culture of rural California. Privately funded, the 9-acre site is open year-round and will expand by another nine gardens next year. Katie Gerfen





воок

**EXHIBITION PSFS: Nothing More Modern I Yale Art & Architecture Building, New Haven I through November 5** In its curators' words, *PSFS: Nothing More Modern* seeks to show that Howe & Lescaze's Philadephia tower represents "a distinctly American synthesis of art and commerce." Sales brochures and other materials demonstrate the company's use of modern design to promote an image of efficiency and progress—not avant-gardism. "This building is ultramodern only in the sense that it is ultrapractical," PSFS's president told a reporter. Most instructive is a series of elevation

studies that starts with George Howe's 1926 Beaux-Arts scheme and—after he teams up with Swiss-born modernist William Lescaze in 1929—becomes increasingly simple and unadorned. It is the story of the most important aesthetic revolution in twentieth-century architecture, told in seven drawings. **Mark Alden Branch** 



## False Flat: Why Dutch Design Is So Good | Aaron Betsky with Adam Eeuwens | Phaidon

Aaron Betsky (an Architecture editor-at-large) grew up in The Netherlands, which helps him stitch together all things Dutch from its dikes and polders to its Rembrandts and Rietveldts and show why the country's design offerings are just like its landscape: seemingly flat and no-nonsense, but in reality variegated and vibrant. His meandering treatise-cum-memoir tells us as much about Dutch society as it does about its artistic tendencies—the Droog Design brand and the emergence of the "Koolhaasian baroque" might be its most fascinating case studies—and given a reader's commitment, it convincingly lives up to its subtitle. As a skim, the book surveys Holland's recent trends in graphic, industrial, and architectural design. **C.C. Sullivan** 



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or

# THERE ARE SEVEN REASONS WHY THE AGE-OLD SEARCH FOR THE NEW CONTINUES TO HAMSTRING OUR PROFESSION. BY DOUGLAS KELBAUGH

Seven design fallacies permeate professional practice and schools of architecture. Some are self-imposed and tractable; others are less easily addressed, because they are externally driven. All are deeply embedded in our psyches, and changing them will not be easy. Reform, however, will bring vigor and balance to architecture and urbanism.

## 1. THE SOLO ARTIST

We feel entitled to use buildings, which are commissioned, constructed, and occupied by others, as vehicles for our own personal exploration and expression. Artistic originality and individual authorship are given great sway, a function of the current cult of celebrity. Architecture is an art, but it is more a social and public art than a fine art. Howard Roark is still the most influential architect in America. European stars, many of whom tend to take urban design and sustainability more seriously, seem less Roarkian than their Stateside peers.

## 2. MANDATORY INVENTION

Many students and practitioners feel not only entitled but also compelled to be innovative, avant-garde, and critical, whatever the program or site. Difference for difference's sake and the obligatory invention of form have become slavish ends rather than liberating means. Originality and creativity both require imagination and audacity, but creativity is less about generating from scratch, and more about working resourcefully with givens and constraints. T.S. Eliot put it bluntly: "Immature poets imitate, mature poets steal." It is okay to borrow and steal, but we should admit it freely and praise our predecessors.

## 3. LA TENDENZA ESTREMA

Contemporary movements are usually headlong rushes to extreme positions. Balance, however judicious or passionate, is rarely rewarded. The pendulum is swinging faster than ever, from one pole to another. The dominance of figure over field in my generation has given way to today's dominance of field over figure and pattern over composition. Continuous surfaces and flush skins are fast replacing articulated form.

## 4. ARCHITECTURE TRUMPS URBANISM

If we are artists first and architects second, then we are surely urbanists third. Our cities are too often World's Fairs of oneoff buildings, each gesticulating more wildly for attention than the last. They are scaleless and abstract, refusing to converse at all with their neighbors. As we move from single-use zoning back to mixed-use urbanism—the one *tendenza* that everyone from Krier to Koolhaas happily embraces—urban order is increasingly about appropriate architectural typology, rather than consistency of style or land use.

## 5. GLOBAL TRUMPS LOCAL

Since Alberti and Palladio first played to an international (albeit Western) audience, architects have sought jobs and recognition well beyond the local. Design stars will always be in demand because of their talent and skill. (We all forget how difficult it is to consistently produce virtuoso buildings.) There will be less architectural entropy if architects more deeply engage local traditions, climate, and sensibilities, and there-by resist the global commodification and branding of culture.

## 6. THE FORGOTTEN MIDDLE

For as long as built civilization has existed, architects have served power—the state, the church, the aristocracy, or the oligarchy. This elite patronage is not surprising, given the high cost of honorific buildings. The Enlightenment and then modernism expanded the architect's repertoire to include social housing and utilitarian structures. But since the decline of the modern movement, the academy and the profession have generally given up on this progressive agenda. Academic theory has been dominated by nihilism and negativity for too long.

Architectural firms currently collect more than 50 percent of their fees from institutional commissions. Few serve the middle class. Most architects fear to tread in this embarrassingly uncool world of popular taste, low budgets, production homebuilders, and model homes, even though it represents the bulk of the built environment.

## 7. MORE, BIGGER, HIGHER

Even with the environmental reforms and behavioral changes that emerged during the 1970s and 1980s, Americans still consume five times as much energy and produce a commensurate amount more greenhouse gases than the global average. Our typical homes sit on bigger lots, have more bathrooms than occupants, and have grown 40 percent larger in the last generation, while our families have gotten smaller. Architecture can do much more with much less.

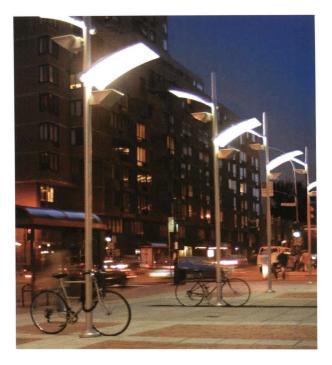
Today, the most promising and synergistic "sponsors" of good architecture are urbanism and sustainability. These twin imperatives are not only noble but they also dampen the fashion pendulum, discourage arbitrary design, make theory more positive, and teach designers when to swing for the fences and when to bunt instead. Together, they provide the power to reorient and reinvigorate architectural culture.

Douglas Kelbaugh is dean of the Taubman College of Architecture and Urban Planning at the University of Michigan.



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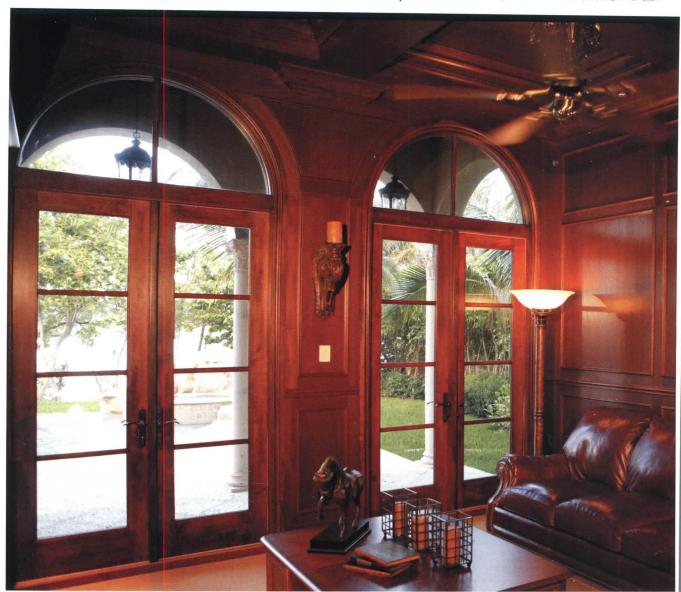




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